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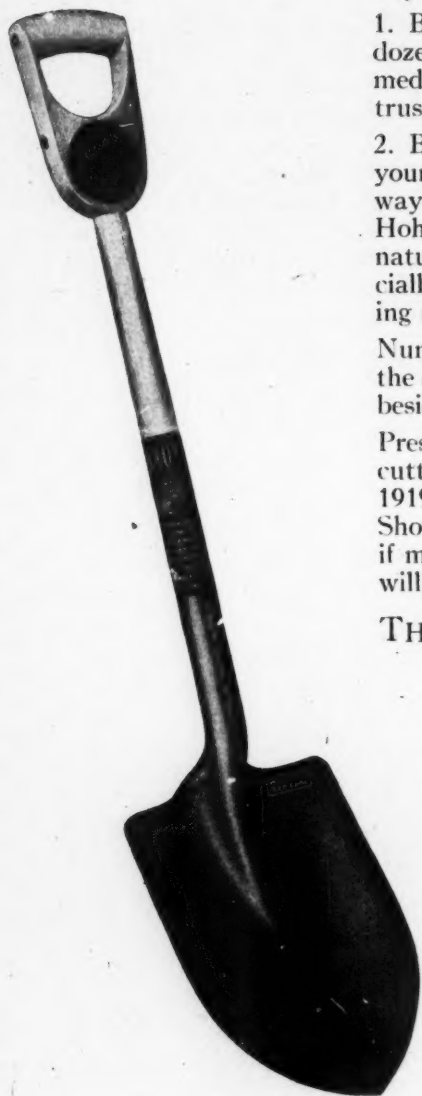
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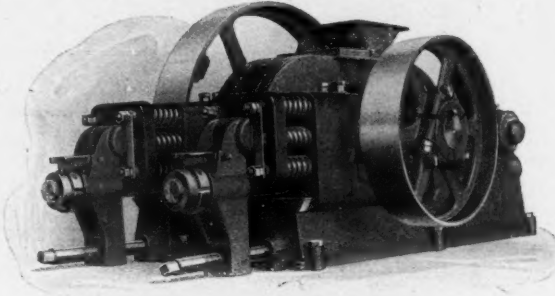
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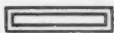
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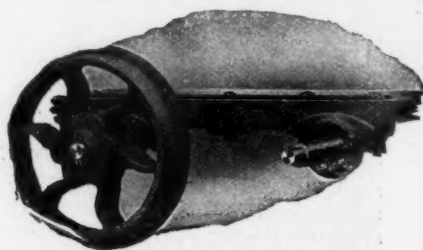
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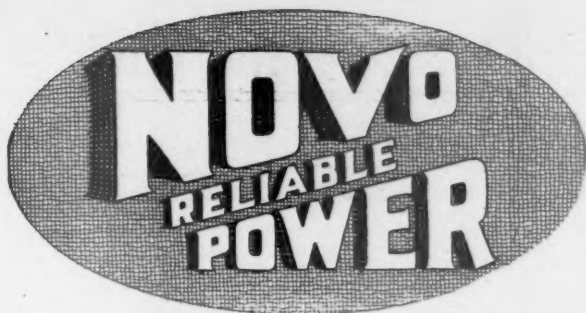
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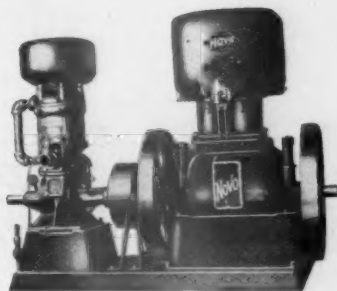
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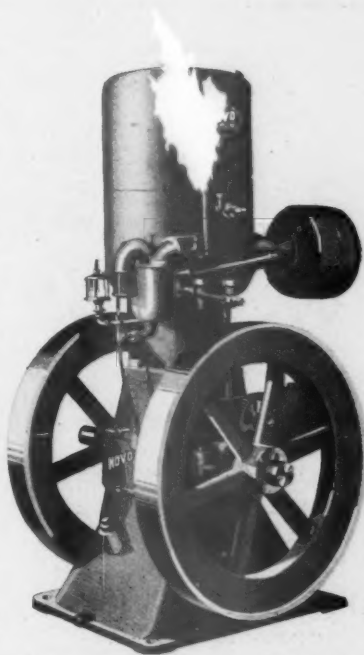
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The ability of our country adequately to meet the needs of the Nation is the greatest of our problems. In the dark interior of our mines and on the scarred sides of our hills are born our freighters and locomotives; our farm tractors and motor trucks; the machinery for our factories and the framework for our sky scrapers; our light, heat and power; in fact nearly all the implements both of our business industry and our home life.

The miners of the country are the men who labor first that these things may be put at the Nation's service. That they realize the importance of their task is evidenced by the way they perform it. Every year sees an increase in the production of practically all minerals—an increase sufficient to meet the nations increased requirements. Even the enormous demands made during the war years were successfully met.

The Hercules Powder Co. is glad to call attention to these men and their work. We know them; well, for our connections with them have been intimate for years. By far the greater part of our production of Hercules Explosives is used by the miners who are doing so much to provide the implements which are vital for the industrial and social progress of the Nation.

**HERCULES POWDER CO.**  
Chicago, Ill.  
St. Louis, Mo.  
New York, N.Y.  
Pittsburgh, Pa.  
Salt Lake City, Utah  
Wilmington, Del.

### \*At the Nation's Service

THE ability of our Country adequately to take a prominent place among the nations of the world is due in no small degree to the mineral wealth with which Nature has so richly endowed us. In the dark interiors of our mines and on the scarred sides of our hills are born our freighters and locomotives; our farm tractors and motor trucks; the machinery for our factories and the framework for our sky scrapers; our light, heat and power; in fact nearly all the implements both of our business industry and our home life.

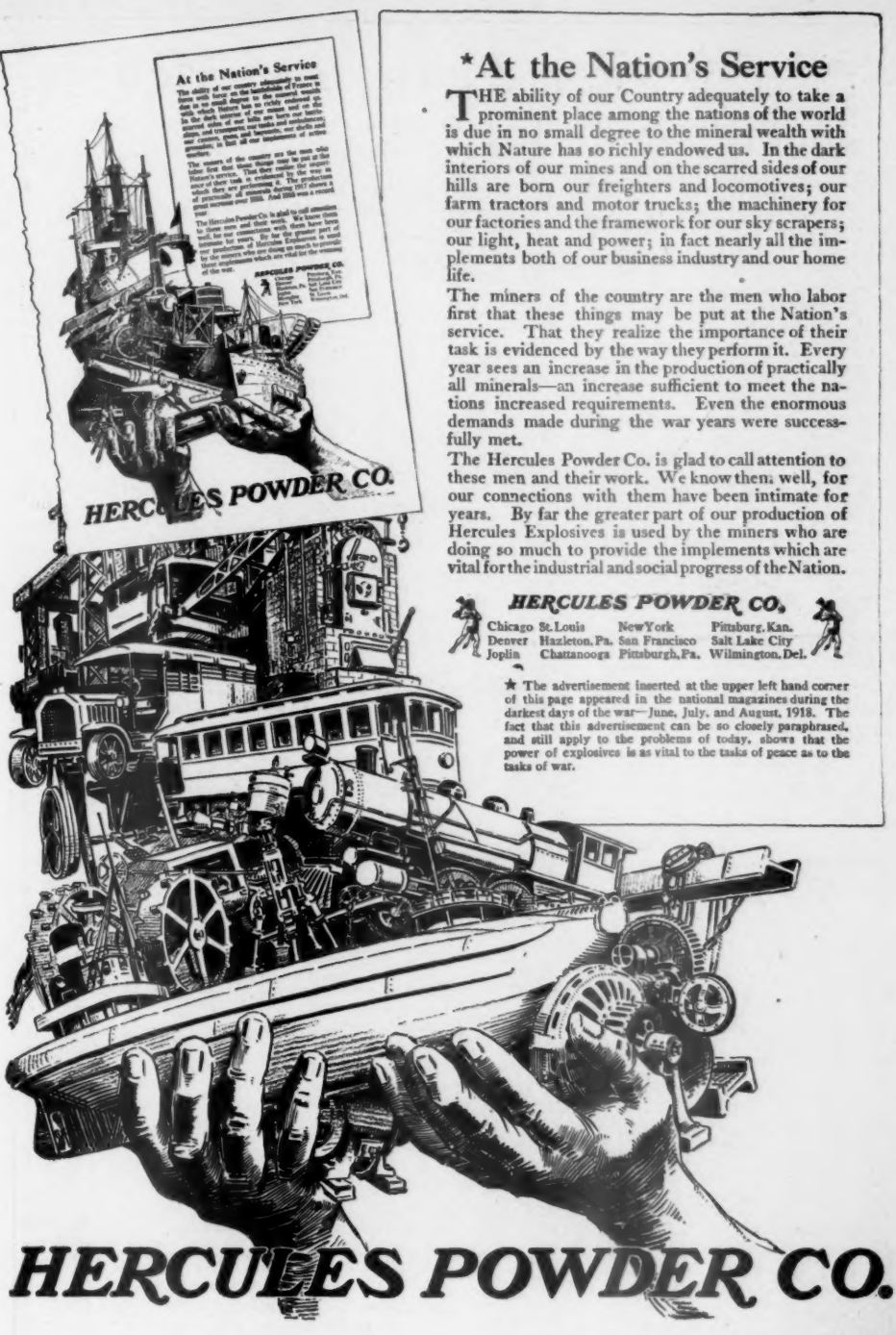
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### HERCULES POWDER CO.

Chicago St. Louis New York Pittsburg, Kan.  
Denver Hazleton, Pa. San Francisco Salt Lake City  
Joplin Chattanooga Pittsburgh, Pa. Wilmington, Del.

\* The advertisement inserted at the upper left hand corner of this page appeared in the national magazines during the darkest days of the war—June, July, and August, 1918. The fact that this advertisement can be so closely paraphrased, and still apply to the problems of today, shows that the power of explosives is as vital to the tasks of peace as to the tasks of war.



# HERCULES POWDER CO.

# For Conservation of Men

**MACHINERY CAN BE BOUGHT**—It's a matter of price and delivery.  
**BUT THE MAN-MARKET**—That's not so simple. And it's getting worse.

## **Pneumatic ROTARY DUMP**

will enable you to utilize elsewhere some of those husky fellows who now perform the numerous operations of handling your mine cars and dumping your coal or ore.



Illustration shows two-car dump in shaft mine. Bulletin 170-M gives further facts and details. Write for it.

### **Wood Equipment Co.**

**McCormick Building, CHICAGO**

**New York:** Architects Bldg.

**Pittsburgh:** Union Bank Bldg.

**Knoxville:** Holston Bank Bldg.

**Denver:** 1707 Franklin St.

*We offer you improvements and protection under Ramsay, Wood, Claghorn and other patents.*

14 C

## **THE CHURN DRILL IN MINING OPERATIONS**



*Prospecting for Coal in the Anthracite Regions*

handles a wide range of conditions. For the past twenty-five years Cyclone Drills, equipped with Cable and Hollow Rod tools, have been used for:

- prospecting for minerals such as coal, iron, low-grade copper, lead and zinc,
- drilling blast holes for mining ore by the quarry or open-cut method.
- drilling blast holes for stripping the overburden from the ore-bearing deposits.
- drilling holes into mines and shafts for ventilation purposes, for the introduction of electric, air and steam lines, and for pumping water out of the flooded areas.
- and for many special conditions where other equipment had failed.

Cyclone Drills are built in traction and non-traction styles with gasoline, steam or electric power.

*A postal to us will bring you literature and our Data Sheet No. 5, which will make it possible for us to help you.*

**THE SANDERSON-CYCLONE DRILL CO.**  
**ORRVILLE, OHIO**

**EASTERN AND EXPORT OFFICE: 38 CHURCH STREET, NEW YORK, N. Y.**

**S**UPPOSE that every man, woman and child in Sharon, Pa., for example—suddenly stopped their everyday occupations and started making rubber goods—and you will get a faint idea of the stupendous magnitude of the great Goodrich Rubber Factories.

Sixty-three buildings—a city in itself—with its own post-office, restaurants, physicians and fire and police protection. All operating with one fixed idea—**"QUALITY FIRST."** No less could have perfected this organization—made it more enduring than the very steel that supports its mammoth bulk.

Look over the products listed at the right, recognized as the best of their kind all over the world. They represent 50 years Rubber Experience.

Our experts are at your service. They will study your individual mechanical needs as conscientiously as if the business were their own. Take advantage of this service.

### **THE B.F. GOODRICH RUBBER COMPANY**

The City of Goodrich—AKRON, OHIO



**"COMMANDER"**  
Transmission Belts

**"LONGLIFE"**  
Conveyor Belts

**"MARATHON"**  
High Speed Belts

**"COMMANDER"**  
Pneumatic Hose,  
Steam, Suction,  
Water, Mill, Boiler  
Washout, Oil, Acid  
and Chemical Hose

**"WHITE KING"**  
Fire Hose

Gaskets, Tubing and  
Mechanical Rubber  
Goods of all kinds

Wires and Cables

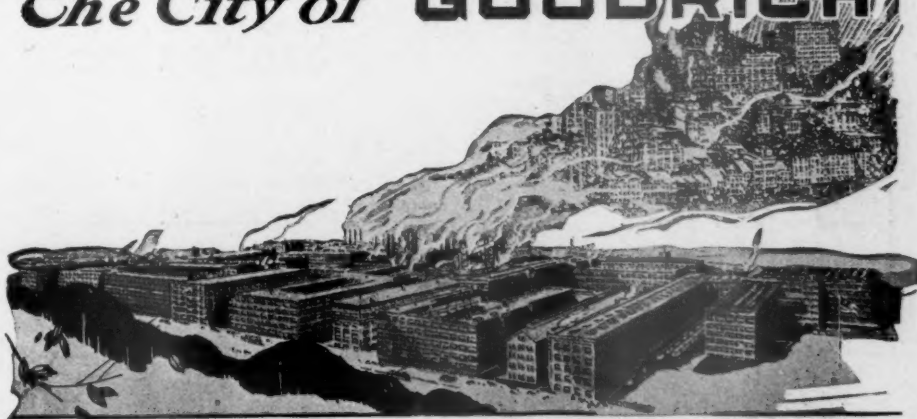
Boots and Shoes

Tires for automobiles,  
bicycles, motor  
trucks and airplanes

# **GOODRICH**

*MECHANICAL RUBBER GOODS*

*The City of* **GOODRICH**



**20 THOUSAND INHABITANTS**



# WORTHINGTON

*Keeping ahead  
of the country*

"**N**OTHING succeeds like success"—this is in brief the story behind each of the plants grouped under the Worthington name.

For each has, through many years, held its own high place in the esteem of American industry; indeed each was called into being by some vital need of industry, and you will find our products in the service of countless important branches of the country's production.

And because our products are such necessary partners in so many and so varied interests, our growth has fairly paralleled the nation's industrial development. From modest beginnings to eight great plants, each both pioneer and leader in its field, each under a common name preserving past traditions of service and satisfaction—this is the concrete measure of Worthington success, and a hint as well of the even larger part to be played in the future.

## WORKS

**Worthington Works**

Harrison, N. J.

**Blake-Knowles Works**

E. Cambridge, Mass.

**Power & Mining Machinery Works**

Cudahy, Wis.

**Ingeco Engine Works**

Cudahy, Wis.

**Deane Works**

Holyoke, Mass.

**Laidlaw Works**

Elmwood Place

Cincinnati, O.

**Snow-Holly Works**

Buffalo, N. Y.

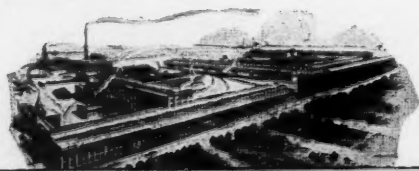
**Hazleton Works**

Hazleton, Pa.

**Worthington  
Pump and Machinery  
Corporation**

115 Broadway  
New York City

*Branch Offices in  
24 Large Cities*



LARGEST MAKERS OF PUMPING AND MINING MACHINERY

## The Roessler & Hasslacher Chemical Company

100 William Street  
NEW YORK, N. Y.



## Cyanide of Sodium

96-98%

Cyanogen contents 51-52%

"Cyanegg"

or Cyanide of Sodium 96-98% in egg  
form, each egg weighing approximately  
one ounce.

Manufacturers of

## "National" Brands Safety Fuse

For use in all mining, quarry  
and agricultural blasting

THE  
NATIONAL FUSE & POWDER  
COMPANY

Office and Factory

DENVER

COLORADO



## Over Any Track

where your mine cars will run, you can use the  
**Goodman Articulated Storage Battery Locomotive**



**T**HE boggy-truck construction of this locomotive permits it to work around any mine track curve. And no excessive clearance is needed for the corners of its cabs in rounding curves.

Moreover, light rails may be used in rooms and side entries, because the weight of locomotive is distributed over eight wheels. Equalizers in the trucks insure constancy of wheel pressures.

Bulletin 522-M shows other exclusive advantages of this Articulated Locomotive, that appeal to practical men. Sent if you write for it.

## GOODMAN MANUFACTURING COMPANY CHICAGO, ILLINOIS

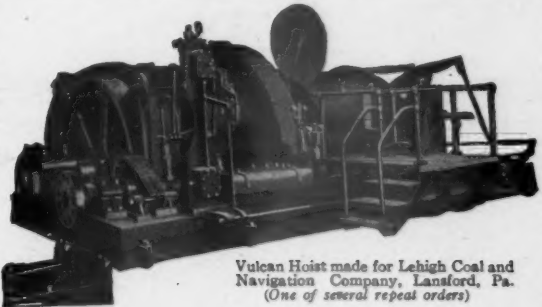
New York, Cincinnati, Denver, Charleston, W. Va., Pittsburgh, St. Louis, Seattle, Birmingham

66

## VULCAN HOISTS Concentrated Power

Concentrated, economical hoist power is a vital element in every profit and loss account.

Vulcans include every device that assures economy and safety. Vulcan Hoists cannot overwind. Vulcan brakes hold the drum absolutely stationary, even against the full driving power of motor or engine.



Vulcan Hoist made for Lehigh Coal and Navigation Company, Lansford, Pa.  
(One of several repeat orders)



Many of the largest—and most prosperous—firms throughout the country have standardized on Vulcan Hoists.

## Vulcan Iron Works

1736 MAIN STREET

Wilkes-Barre,

Pennsylvania

NEW YORK

CHICAGO

# **ROEBLING**

## **WIRE ROPE** **THE STANDARD WIRE ROPE** **FOR MINING**

"Over seventy- five years' experience in  
the making of wire rope"

**John A. Roebling's Sons Company**  
TRENTON, N. J.

### **Mine Ropes**

OF QUALITY  
for  
HOISTING, HAULAGE or SLOPE,  
also

PATENT "KILINDO"  
NON-ROTATING

### **Wire Rope**

FOR SHAFT SINKING.

Sole Makers

**MONARCH PATENT**  
**MINE CAR HITCHINGS**

Adaptable to any System  
Haulage. Absolutely Safe

**Macomber & Whyte**  
**Rope Co.**

RACINE AVENUE  
KENOSHA, WISC.

### **HAZARD** **WIRE ROPE**

**INSULATED**  
**WIRES & CABLES**



**HAZARD MFG CO**  
**WILKES-BARRE PA**

NEW YORK      PITTSBURGH      CHICAGO  
533 CANAL STREET      1st NAT'L BANK      822 W ADAMS ST

# When Selecting Electrical Equipment For Mine, Mill or Smelter

Haulage

Casting Machine

**Remember—**

that no company has given greater, or more careful consideration to Mining Applications than Westinghouse, and

that many years' experience in this field has produced a line of electrical equipment specially adapted to mining service.

Westinghouse Mine Equipment is unexcelled in either reliability or efficiency. Thousands of installations stand as a justification of this claim.

**Westinghouse Elec. & Mfg. Co.**  
East Pittsburgh, Pa.

Pumps

Smelter

Cotton

Hoist

Flotation

Compressor

Converter



**BELT STRENGTH**  
is no greater than the  
strength of the joint.

### **ALLIGATOR STEEL BELT LACING**

provides a joint as strong as the belt itself. No tool but a hammer is needed to apply it and any workman can make a smooth joint in a few minutes. It means a saving in time, labor and money.

Alligator Lacing is a proved success on all kinds and sizes of transmission belts—from the lightest single leather to the ten ply fabric belting.

Alligator Lacing may be obtained thru mill supply dealers or we will send complete descriptive literature and price list, direct on request.

### **FLEXIBLE STEEL LACING CO.**

Also Manufacturers of Plexco and Flexco-Lok Lamp Guards  
Dept. A. L. 25, 522 So. Clinton St. Chicago, U. S. A.

## **FOR SALE**

**1500 Gross Ton 50-lb. Rail**

### ***Immediate Delivery***

This rail must be sold immediately. Our price assures a sale. Write, wire, call. Can ship two cars per day.

8-, 12-, 16-, 20-, 30-, 50-lb.  
in stock

Our large stock of overhauled equipment ready for immediate delivery will fill your demands.

## **A. H. SIMPSON CO.**

**MACHINERY—NEW AND USED**

**633 Stevenson Street**

**SAN FRANCISCO**

**CALIFORNIA**

## **SOUTHWESTERN ENGINEERING CO.**

*Incorporated*

### **Engineers and Manufacturers**

### **K & K FLOTATION MACHINE**

Efficient, large capacity, relatively less floor space and power.

### **HAMILL ORE FEEDERS**

Absolutely automatic.

### **MacCAMY INTERCOOLERS**

Will increase the efficiency of your air compressor.

The above are worthy of investigation. Let us tell you more. We will be pleased with the opportunity

### **FLOTATION**

**and**

### **CONCENTRATION**

### **ORE TESTING LABORATORY**

**Los Angeles**

**Calif., U. S. A.**

## **EQUIPMENT**

**USED AND REBUILT**

Ready for Delivery: Buckets, Cars, Compressors, Crushers, Drag-Lines, Cranes, Hoisting Engines, Steam Shovels, Rails, (all weights) and Locomotives.

### **MACHINERY WAREHOUSE & SALES CO.**

*Successors to GEO. C. MARSH & CO.*  
**707 Old Colony Bldg., Chicago**

## **BALLS**

We make

**"DIAMOND" Brand**

### **FORGED STEEL BALLS**

for ball mills

If you want the most serviceable ball made, get in touch with us

### **THE MINE EQUIPMENT & SUPPLY CO.**

**Foster Building, Denver, Colo.**

# To Our Members:

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## THE ADVERTISERS

in *The Mining Congress Journal* are distinctly a part of the organization of The American Mining Congress.

## THE SUCCESS

of each of these advertisers depends, in a measure, upon the prosperity of the mining industry; and the prosperity of the mining industry in turn, in a measure depends upon the results obtained by the work of your organization—**The American Mining Congress.**

## REALIZING

the great part being played by The American Mining Congress in the creation of better conditions which will enable the expansion of the mining industry, these Advertisers are giving their assistance in carrying on the work, by using space in your Journal.

**YOU** *can reciprocate* by giving them a chance to fill your needs for machinery and supplies, and by placing your orders with them when you can consistently do so.

**WE** bespeak your cooperation.



# United Metals Selling Company

42 Broadway, New York

*European Agents:*

**C. S. Henry & Company, Ltd.**

12 Leadenhall St., London, E. C.

**Electrolytic Copper**  
**Best Selected Copper**  
**Pig Lead—** Dealverized Common  
and Corroding  
**Electrolytic Zinc**  
Highest Grade and Purity

**N E C & B M Brands**  
**A B S & M A Brands**  
**International (I. L. R. Co.)**  
**Anaconda Electric**

*Selenium, Arsenic, Nickel Salts, Tellurium  
Copper Sulphate*



**Are You Getting  
This Every Month?**

**Ask Us To Put You  
On Our List**

**HAND-FIRED STOKER  
SOOT BLOWERS  
SHAKING GRATES  
DRAFT BLOWERS  
BOILER FRONTS**

*Send for Catalog*

<b>Coal Crushers</b>	<b>Shaking Screens</b>
<b>Tipples</b>	<b>Feeders</b>
<b>Larries</b>	<b>Sheaves</b>
<b>Mine Cages</b>	<b>Conveyors</b>
<b>Gravity Screens</b>	<b>Elevators, Etc.</b>

*Send for Bulletins*

**MARION MACHINE, FOUNDRY AND  
SUPPLY COMPANY**

**P. O. BOX 800      MARION, INDIANA  
SCOTSDALE, PENNA.**



# The "Ironclad-Exide" Battery

## FOR MINE LOCOMOTIVES

There are two separate and distinct characteristics of a storage battery and upon which its selection for use on the Mine Locomotive must be based.

One is power--the other Durability.

Both are essential if anything approaching truly successful operation of the Mine Locomotive is to be attained. In

## The "Ironclad-Exide" Battery

Both these characteristics are provided for---they are built in.

There is nothing experimental in the "Ironclad-Exide" It has stood the test of actual service for many years in some of the largest and most productive mines in the country. Wherever the "Ironclad-Exide" is used, greater haulage, reduced haulage costs and general speeding up of labor is the rule---not the exception. The special positive plate construction,

patented cell cover and non-flooding filling plug are a few of the exclusive "Ironclad-Exide" features which render it easy to care for and maintain at a minimum of cost.

Our nearest sales office will explain what the "Ironclad-Exide" Battery has accomplished for others and what it will accomplish for you.

## THE ELECTRIC STORAGE BATTERY CO.

1888

PHILADELPHIA

1918

PITTSBURGH  
DETROIT  
CHICAGO

SAN FRANCISCO  
ATLANTA  
KANSAS CITY

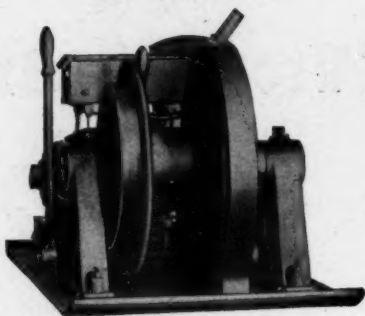
CLEVELAND  
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*Pneumelectric*  
TRADE MARK

For  
Handling  
Cars  
Any  
Place



Made in  
Single  
and  
Double  
Drum

5-Horsepower Electric Hoist.

Specially adapted for use in and about the mines.

We also manufacture electrically operated Rock Drills, Coal Punchers,  
and Gathering Pumps.

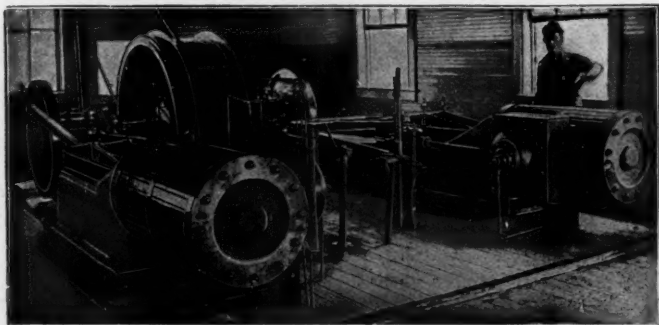
Full information furnished on request.

**THE PNEUMELLECTRIC MACHINE COMPANY**  
SYRACUSE, N. Y.

## ROBT. HOLMES & BROS., Inc.

Successors to DANVILLE FOUNDRY & MACHINE CO.

Corner North and Hazel Streets, Danville, Ill.



### MANUFACTURERS OF

Danville Hoisting and Haulage Engines, both Light and Heavy Duty Type, first and second motion.

Halbert's Patent Self Dumping Cages.

Plain Cages.

Holmes' Shaker Screen.

Holmes' Telescoping End Loader.

Holmes' Patent Weigh Hopper.

Holmes' Automatic Car Lifts for mine bottoms.

Iron, Bronze and Brass Castings of all description.

Heavy Iron and Steel Forgings.

All kinds of Plate Metal Work, particularly for coal mines.



Haulage Locomotive at Montana Mining Company  
Hurley, Wis.

### *Most Ore Hauled—by Correctly Selected Locomotives*

We will take your complete service data and prescribe the exact locomotive to meet maximum tonnage conditions. Our many standard types of locomotives and our extensive experience make this possible.

For gathering service we have cable reel and storage battery or combination types that automatically change from trolley to battery or vice versa.

For haulage work we have trolley types that embody all the good and reliable features found in modern mine locomotives. The combination represents years of experience on the part of competent designing engineers working in conjunction with the best talent in the operating field.

Electric locomotives are more easily controlled, more reliable in operation and will haul more cars per trip and more trips per day than any other type. The first G-E electric locomotive, built a quarter of a century ago, is still in successful operation.

63-104

**General**  **Electric**  
General Office **Company** Schenectady, N.Y.



**Stephens-Adamson Mfg. Co.**  
AURORA, ILLINOIS



# THE MINING CONGRESS JOURNAL

*Official Organ of the American Mining Congress*

## CUSHING AND COMMON SENSE IN COAL INDUSTRY

Are the dangers of cooperation so great as to make all efforts inadvisable which look to a stabilizing of the coal industry? Are the most valuable lessons of the war to be of no avail because some brilliant theorist is able to fancy an imaginary line between acts which stabilize the great basic industry of coal mining, and an imaginary violation of the Sherman Anti-Trust Law? MINING CONGRESS JOURNAL does not believe that the proposed plan of the National Coal Association, through which its members shall be advised of market conditions, can, by any stretch of imagination, be construed to be a violation of the Sherman Anti-Trust Law, nor of the Clayton Act. On the contrary, it regards the proposed plan as an extremely practical method by which the provisions of the Federal Trade Commission Act shall be effectively enforced, with reference to the suppression of unfair methods of competition.

In an article which appears on another page of this issue, George H. Cushing assumes "that the real purpose of cooperation is, in some way, to nullify the law of supply and demand, and thereby to give a price to all operators which is profitable to all of them, notwithstanding the fact that the number of mines in existence is 50 per cent in excess of the number that is actually required."

Mr. Cushing clearly outlines that unless this method is pursued the result will surely be a cut-throat competition, a selling of coal below the cost of

production which will necessarily and naturally result in driving out of business the 2,500 mines which represent the surplus production capacity of the nation's coal industry. It is true that Mr. Cushing's language is studiously broad enough to cover all efforts of any branch of the coal industry and also that it was written before any detailed plan of any association was made public. Still it is published after the National Coal Association plan was announced and, whether he so intended or not, it will be read as a direct criticism of that association's plan. The latest enactment of the Federal Government relating to combinations is that contained in Section 5 of the Act creating the Federal Trade Commission, and directs that commission "to prevent persons, partnerships, or corporations . . . from using unfair methods of competition in commerce."

It cannot be assumed that one-third of the coal-producing capacity of the United States must operate under an average production cost greater than the other two-thirds of such capacity. In order that the 2,500 mines referred to by Mr. Cushing shall be driven from business, it is necessary that the other 4,500 mines shall sell coal for a considerable period at less than the cost of production. As Mr. Cushing expresses it: "If there are 50 per cent more mines than are necessary, and if the competitive spirit among them were allowed free play, the result would be a price for coal which must, in short, eliminate from business those companies which had such short purses, they could not any longer endure the loss." In other words, only those



mines with big capital or extensive credit could remain in business. This is the exact process for which the Standard Oil Company has, in the past, been prosecuted in the courts and condemned by the people. Can it be that an intelligent effort, which contents itself with publishing facts as to market conditions and which thereby "holds up that price to a point where it avoids the obvious consequences of too many mines, is properly a movement in restraint of trade, no matter how innocently that movement is phrased"? On the contrary, the Clayton law, to again quote Mr. Cushing, "strengthens the purpose and intention of the Sherman Anti-Trust Law by inveighing against unfair competition or against those devices by which the unnecessary units in a business are eliminated therefrom." This last quotation is a most exact statement of the purposes which the National Coal Association has in mind to protect the coal industry from bankruptcy, to preserve the machinery of production and maintain a fair competition which will protect the consuming public against unfair prices, and which will, at all times, keep available for public use a little more coal than enough to supply the consumption demands.

MINING CONGRESS JOURNAL believes that the plan proposed by the National Coal Association carries with it possibilities of great service to the miner, to the operator and to the consuming public, and makes possible a proper conservation of the fuel supply of the United States for the benefit of future generations.

#### WAR MINERALS RELIEF

A two-month fight in Congress to secure relief for the men who stood to lose fortunes through the failure of the War Minerals Bill to function is ended by the signature of President Wilson to the War Minerals Relief Bill which places in the hands of Secretary Lane \$8,500,000 with which to meet the claims of producers.

Only net losses on production or development for the purpose of production of manganese, chrome, pyrites, or

tungsten, requested or directed by the Department of the Interior, War Industries Board and other Federal agencies, will be paid after ores or equipment are salvaged at the best prices.

This closes a most valuable work in behalf of the mining industries by the War Minerals Division of the American Mining Congress. The executive committee of the division has been quite constantly on duty in Washington assembling data, assisting the senators and representatives from mining states to make proper investigation into the proofs and carrying on a general campaign of education as to the causes of the distress among mining companies. The first bill included all war minerals named in the law which passed Congress October 5. The final measure covers but four substances, these being recognized by the Interior Department.

All claims for relief must be filed with the Bureau of Mines within three months after the measure becomes a law.

This is another triumph for cooperation. The American Mining Congress assembled such a mass of evidence and presented such convincing proof of actual distress that many congressmen, at first quite unwilling to believe that such conditions could exist, finally withdrew their objections. Many members of the War Minerals Division Committee remained in Washington from the date of the convention held in December until the bill was passed.

#### UNITED STATES TREASURY

##### AND THE GOLD SITUATION

Another page of this issue carries the report of a committee appointed by the Secretary of the Treasury to investigate the conditions of the gold mining industry.

MINING CONGRESS JOURNAL cannot approve the conclusions reached by this committee. It does not agree with the committee that the problem involved was a war problem.

It has at all times believed and still believes that a proper relation between the gold reserves and the structure of credit, which it supports, is an intensely vital question in times of peace. We



therefore fully agree with the statement of the committee that "in times of peace the gold reserve is undoubtedly an important factor in controlling the credit structure, but in time of war that structure is determined by other causes;" but we cannot approve the latter statement that "the cessation of hostilities radically changed this situation, and, with the change in the situation, any need of particular effort to promote or stimulate our gold production which may have existed has ceased." The MINING CONGRESS JOURNAL still believes that the need of gold depends entirely upon the amount of credit which it is called upon to maintain. During the war, when all gold was under embargo, it mattered not whether or not there was much or little in the treasury. When gold is again permitted to perform its usual function, the question will again become vital to business life. We agree with the committee that at this time it would be unwise to undertake to follow the recommendations made by the Reno Conference, but that does not necessarily mean that there is no need for special stimulation of the gold mining industry. It is not at all probable that prices will ever again reach the levels of 1915. Gold mining cannot be profitable, except to the high-grade mines, until prices fall again to that level. The use of money must necessarily increase in proportion to the expansion of our business transactions. High prices mean larger business transactions, the higher the price the more money required to carry on business; the larger the business transaction, the more money required.

The Government's obligations to other nations have already been paid for many years to come. It is not for the settlement of trade balances that gold is required, but as a reserve to support credit money with which our domestic business transactions are carried on. The approval given by the committee to the views of Prof. Irving Fisher will not be consoling to those who believe in the gold standard. MINING CONGRESS JOURNAL regrets that it is unable to agree with the eminent authorities who unite in agreement that the stimulation of gold production is a matter of small importance.

In the year 1907, at a time of great business prosperity when all labor was employed at the highest wages theretofore known in the world's history, a lack of confidence in the ultimate redemption of commercial obligations brought on a panic, business was paralyzed, the banks of the country refused to pay back the money of their depositors, except in certain limited quantities, and the situation was so serious that the public fully approved the banks' repudiation of their obligations.

The Federal Reserve Banking System grew out of the panic of 1907. But even this wonderfully valuable piece of legislation carries with it the possibility of an inflation which would have alarmed even the most radical devotee of greenbackism.

The inflation of 1907, which precipitated the panic of that year, did not approach the present situation. The present level of prices is an indisputable proof of that statement. Notwithstanding the assertions of college professors of the Fisher type that high prices result from an over-production of gold, it remains true that high prices never were in the history of the world predicated upon an over-production of gold nor upon an over-supply of gold, but always upon an over-supply of credit money. It will be said that increased gold supplies make possible an increased inflation. This is true but in part. The gold supply of the world today does not exceed by more than 10 per cent the gold reserve of the period of 1907. The price of war products today is 75 to 100 per cent greater than in 1907. High prices are not based upon gold, but upon the excess credit which precedes and leads up to financial panics and business depressions. The world needs to stimulate the production of gold more today than ever in its history.

#### A NOTABLE ADDRESS

In an address before the organization meeting of the California Chapter of the American Mining Congress at San Francisco, Cal., January 7, 1919, which appears on another page, Mr. Thomas A. O'Donnell outlined most vividly the

advantages of individual development which have made this country great.

From living in a tent with his widowed mother through the rigors of a Colorado mountain winter until the springtime made possible the construction of a cabin from slabs to a position which commands the respect of oil men from one end of the United States to the other, to a position which commands the absolute confidence of his business associates—furnishes an example which must command attention. Mr. O'Donnell is regarded as among, if not the most expert of men in the practical development of oil production—probably no man in the country has done more to make possible the winning of the war.

Most likely this thought has never entered Mr. O'Donnell's mind. He is one of the many modest leaders of industrial development the sum total of whose efforts furnishes the foundation upon which the power of this nation in peace or in war is based. The success of these men could never have been accomplished except in surroundings permitting the development of the individual. In surroundings offering big rewards for big effort, which promised the freckled-faced, half-clad, poorly-housed urchin that thrift, industry and perseverance, both physically and mentally, would eventually be rewarded. These qualifications have always, perhaps without a solitary exception, brought success. They have not always developed genius, for that is an inheritance, but always success.

#### THE VALUE OF COOPERATION

Among the many useful lessons which the great war experience has brought to us is the fundamental necessity for cooperation if the best results are to be obtained. During the war this nation, without regard to party, placed its resources and its support completely in the hands of their President. No other country furnishes a record of more rapid mobilization of power than was made by the United States during the year 1918. This marvelous speed of accomplishment was accompanied by the usual and necessary waste. Speed and power are inter-

changeable terms. The greater the speed the more power required. As a nation we can well afford to assume the burden of the waste which was required by our speedy accomplishment and content ourselves with the thought that speed can only be accomplished through a corresponding loss of power. Our national lesson is that we saved through cooperation more than we lost by great speed. We should find means by which to take advantage, in peace times, of the benefits of cooperation while avoiding the waste occasioned by the speed required during the war period.

During the war a less number of men produced an increased amount of coal. With 25 per cent of its labor capacity withdrawn from industrial operations the productive capacity of the nation as a whole was increased, and this notwithstanding the fact that the workmen as a whole performed less of service than in ordinary times. The best records at hand indicate that the efficiency of workmen decreased 25 per cent during the war period, and that as efficiency decreased wages increased. Notwithstanding this, the total productive capacity of the nation was at its maximum during the war period. This can be partly accounted for by the failure to replace and rebuild wearing out equipment, by the failure to keep reserve ore development ahead of mining operations, but more largely to a more perfect cooperation among the directing forces of the various industries. It did not grow out of the doctrine of the survival of the fittest. To accomplish these results all must survive and all must cooperate; all must work in complete cooperation. Reasonable competition is still and will continue to be the life of trade. Unreasonable competition, that competition which leads one business concern to undertake to drive his rival from business by cutting prices, carried to its legitimate conclusion, is the very reverse of that competition which is the life of trade. It ultimately leads to the creation of monopoly over which governmental agencies have no control. The Sherman Law was intended to foster reasonable competition and to prevent monopoly. Its enforcement has never been satisfac-

tory to the business life of America. It is time that this nation again gave fresh consideration to the principles involved, with a view to relieve business operations from restrictions tending to prevent that perfect cooperation which is essential to the highest efficiency of production.

The late ex-President Roosevelt declared this law to be "so incapable of enforcement as to make decent men violators of the law against their wills and to put a premium on the behavior of wilful wrongdoers." We believe the consensus of American opinion is to the effect that this law should be so amended or some new law should be enacted which would remove "the twilight zone" into which honest men fear to go and into which dishonest men may hide improper transactions under the uncertainties of the law. The referendum vote which is now being conducted by the Chamber of Commerce of the United States will more than likely result in the conclusion that the Sherman Law should be so amended as to permit reasonable business combinations under government supervision although it may not approve the plan which was submitted by the committee to accomplish this end.

Unfortunately, the Federal Trade Commission has not so functioned as to command the undivided approval of the business men of the United States. The original conception of a Federal Trade Commission was an organization which should be an aid to business. It grew out of a joint meeting of the Indiana and Illinois coal men, held in Chicago early in the year 1912. At this conference a 95 per cent representation of the coal mining industry of these two states agreed upon the absolute necessity of better cooperation if the bankruptcy of the coal industry in those states was to be avoided. This agitation led to the consideration of this subject by the United States Senate Committee on Interstate Commerce beginning in December, 1912. These business units were greatly disappointed that Congress did not endow this new commission with power to aid business, and were greatly

disappointed that the powers given to the Federal Trade Commission, aside from its power to suppress unfair methods of competition, were limited to the investigation of business conditions, which power already existed in the then Bureau of Corporations.

It was hardly to be expected that an agency without power to accomplish those things which were needed and hoped for by the business of the nation could so conduct its affairs as to command their entire confidence. Any prosecuting agency is likely to make enemies of those whom it prosecutes and is not likely to receive the approbation of those who need assistance which it is unable to give. And this is particularly true when the agency was expected to render assistance and for a time conducted itself as though it expected to give such assistance. Under the present law the Federal Trade Commission has little power to affirmatively assist in securing the efficiency which cooperation in business life has shown to be possible by the nation's conduct during the war. It is up to the business life of the nation to present to Congress concrete plans through which these desirable conditions may be created.

#### GOLD EXEMPT FROM THE REVENUE LAW

Senator Thomas, of Colorado, must be given credit for one real promising effort in behalf of the gold industry. In the War Revenue Bill, Subdivision "D" of Section 304, reads as follows:

"In the case of any corporation engaged in the mining of gold, the portion of the net income derived from the mining of gold shall be exempt from the tax imposed by this title, and the tax on the remaining portion of the net income shall be computed upon the basis of an invested capital, which bears the same ratio to the full invested capital as such remaining portion of the net income bears to the entire net income."

From the standpoint of the nation's interest in gold, no one step, practically without cost to the nation, will better serve the purpose of aiding the production desired than its exemption from the provision of the federal revenue law.

While this exemption will not in any way benefit the production of gold from low grade properties, because under present conditions it is impossible to make any profit from their operation, in most instances the loss in operation is so great as to force the closing of the low-grade mines. In the production of gold from high-grade mines, the conditions are entirely different. There the application of a 60 per cent tax has much the same effect as a 60 per cent tax would have upon a bank, because of its transfer of cash from one fund to another. It will be readily seen that a 60 per cent tax applied to the transfer of funds from one account to another would effectually prevent the transfer. The relief which this exemption provides for gold mining will very largely stimulate the production from the high-grade mines.

It will not, however, provide the remedy which the MINING CONGRESS JOURNAL has been urging in order that low-grade mines might be kept in operation. Sooner or later high-grade gold will all be extracted and in the end will take its place as a Basis of support for our currency issues. The low-grade mines, once dismantled, will not be reopened unless the price of gold shall double its present purchasing value. That gold will not become a part of our gold reserve except under conditions which will be extremely dangerous to our financial structure. Special stimulus should now be given to keep these mines in operation and prevent the waste and destruction which will necessarily follow a cessation of operation.

Senator Thomas with other members of the Senate Finance Committee are entitled to the special appreciation of the mining industry for that study of its conditions which has enabled them to report a bill bringing to the mining industry a large share of justice. Senator Thomas is entitled to special credit for the provision in the Revenue Bill exempting gold mining from its provisions.

#### IS SELF-REFORM OF ORGANIZATION POSSIBLE?

It is frequently stated and fully accepted by many people that any large

organization, political or otherwise, can be reformed best from within and that efforts on the part of outsiders to accomplish its reform only cement its following into a more active opposition to the desired changes. This general belief is subject to question. The present viewpoint of the employers of labor, toward organized labor and toward labor generally, has been very materially changed in recent years. It can scarcely be claimed that all these reforms have been brought about through the initiative of the employer. In fact, competitive conditions in business life increase the employer's necessity to get the most of service by the payment of the smallest wage possible.

The United States Steel Corporation during recent years made seven voluntary increases in the wages of its employes. The fact that it has voluntarily made these various advances, some of which it might well have withheld and all of which it might have made under protest, rather than because of its ability to pay the increased wage, is very greatly to its credit. Many other corporations have a splendid record in this direction. Some few corporations deserve condemnation because of a reluctance to treat in a proper spirit the rights of their employes to the best wage the business in hand will warrant.

MINING CONGRESS JOURNAL believes that the last great coal strike in Colorado was not justified, that its inception was based on motives which cannot be justified. Notwithstanding this, the result of that strike, with its terrible loss of life and its large destruction of property, was to bring about a better appreciation, on the part of the Rockefeller interests, of the proper relation which should exist between employer and employe.

The reform began from without. It seems equally difficult for organized labor to reform itself against practices which all admit to be wrong, which cannot in the end bring benefit to organized labor and which do bring it into disrepute and create for it bitter animosities and opposition which are not for



its benefit nor for the general good of the public. The suggestion is offered that unionized labor, having much to its credit in the reformation of its employers, might itself receive untold benefit by effort on the parts of its employers to educate its membership. An acceptance of the belief that its best interests will always be served by keeping strictly within the requirements of law will mean an absolute repudiation of I. W. W. methods; of Bolshevism; of the principle embodied in the claim that any workman is entitled to any particular job. Collective bargaining must be collective bargaining—i. e., the voluntary meeting of the minds of both parties in mutual agreement. The contract proposal must not be enforced by the covert threat, supported by much of precedent—that unless the employer shall meet the demand he will not be permitted to operate his plant with any other help which he may be able to obtain. The rights of the employee must not include the destruction of the rights of the employer. Each side must give fair and full consideration of the rights of the other side and both must work in harmony if the best conditions are to be obtained.

#### LEARN BY EXPERIENCE

The coal industry is placed in a position where a great many coal men are asking themselves and each other: Has the coal trade learned anything out of or as a result of this war?

Things which the coal industry might have learned are three, namely:

First, by the creation of the Fuel Administration as the head of the industry the trade was brought to a focus at one point and had to act as one piece of machinery to do one thing, viz., to produce the amount of coal which the people had to have.

Second, by the creation under the Fuel Administration of the zones, coal learned that there is a natural transit limit for each fuel and that, therefore, there is only a natural market in which coal can be sold without incurring unusual and unwarranted expense.

Third, by being allowed to work steadily, in spite of enormous increases in the cost of material, coal producers learned that the cost of production could be kept below what any one of them believed to be possible.

The three lessons which the coal trade learned, therefore, were: the value of cooperation as a result of unification of the trade and a division of work among the different branches; the value of a market in the natural zone of that coal and the reduction of the expenses incident to the selling and the value of full working time as a factor in reduced cost of production.

The coal industry should have learned these three lessons because it had all the facts immediately before it and could hardly escape getting the point.

However, the influence of the war has been removed from the coal trade only four months and it is back to exactly the point when it went into the war. Rather than there being cooperation the seeds of disintegration are being sown everywhere. Individuals are distrustful of each other and associations heretofore in affiliation are splitting into warring groups and something akin to a feud exists between the associations representing the different branches of the industry. Apparently the coal men were inoculated by the spirit of cooperation during the war, but it did not take.

As to the matter of steady working time to reduce the cost of production, and the limiting of the number of mines necessary to allow the essential mines to work steadily, the coal men have disregarded the object lesson and have taken exactly the opposite course. All mines are continuing in existence and each one has its working time slowed down to a point where total production will just about equal current demand. That is, every mine is working a little and, therefore, every mine is showing maximum cost of production today.

Answering the question, therefore, whether the coal men have learned anything, it may be said, while they must have learned, they are not putting it to practical use. The coal trade is thus in the position of a young man who

spent sixteen years getting an education, including a college education, and who, with his degree in his pocket, goes out to accept a position as a common laborer.

### CAUSE VERSUS EFFECT

In attempting to solve the problem of a world peace the statesmen of the world are duplicating the same mistake which has so often been made in business in the United States. That is, they are trying to apply the remedy to the effect rather than to the cause of war.

Perhaps it is only a philosophical point, but nevertheless it is a vital point, that the primary cause of the wars from the days of Moses to the days of Wilhelm of Germany has been either the hunger of the people or the fear of hunger. More people have grown up on a certain piece of land than that land could feed.

There was danger, so long as that continued, that the overcrowded population would become hungry. What was the equivalent of the same thing, there was danger that somebody outside of the nation would come to control that nation's supply of food and either elect to starve it or elect to levy tribute on it. It has been the struggle to get away from either or both of these dangers that generally has led to war.

The remedies proposed by the various international treaties have not so far touched that basic question. It would seem that so long as that question remains unanswered the cause for war increases rather than diminishes. Anything which binds a nation within its boundaries and places the food supply in the hands of another people must of necessity create not a cure, but a cause for war. On this account much that has been said and done in the direction of universal peace may be classified as so much waste of time.

### A BIT OF PROPHECY

The current situation in coal is about as follows:

Retail dealers bought at war prices more coal than they could resell, after the armistice was signed, at a profit.

Steam users during the war bought at high prices more coal than they could use during the war and they are now burning high-priced coal to produce low-priced finished products. Also the railroads are blocked up with high-priced coal which they wish now they did not have. Everyone, therefore, is in a position where he feels that he has a coal grievance due to the fact that he indulged too extensively in storage at high prices.

The answer is that all these people will not want to duplicate this experience and buy coal for storage.

Especially they are going to hold off so long as there is a prospect that the wages of labor are going to be reduced. That wage reduction has not occurred. It will be delayed as long as possible. Therefore, prices will continue high as long as possible.

These two things in conjunction will delay the movement of storage coal and that will carry us into the fall with no stocks and prices still high. This prophesies a shortage of coal next fall and high prices unless coal men this summer warn people of the danger and plead for coal storage.

### THE AMERICAN SPIRIT

Within recent weeks the American Mining Congress sent to all of its members a letter informing them of a request of the War Department that the American Mining Congress assist in finding positions for returning soldiers, this letter being accompanied by a questionnaire by which the congress might be informed of the possibility of employing some of these returning men—especially trained miners.

A number of replies thus far received indicate a most distressful condition in the mining districts, and in many cases the operators indicate in very plain language that unless a change can be brought about—a reduction in losses and an increase of market facilities worked out on a reconstruction basis—it will be impossible for them to continue their operations for any length of time. In other districts a few men are needed and



in these districts fine cooperation was indicated by the accompanying letters and lists. Some of the employers who have been merely keeping the properties moving awaiting the returning men, do not feel that the market conditions are sufficiently encouraging to allow them to add to their forces, but in some cases even where such conditions prevail, positions are open and will continue to be open for former employees who were taken into service.

One of the finest illustrations of the real American spirit prompting employers of labor comes from Alfred Martin, general superintendent of the Hollister Mining Company, at Crystal Falls, Mich., in which Mr. Martin says:

We had about sixty or seventy men here who left our employ to join the army and navy and many of these already have returned and we have reinstated them in their old positions. We have also written each one of our boys a letter, a copy of which we are enclosing herewith for your information.

We also beg to say that we are only working eight hours out of twenty-four at this operation, and all that we can do now is to take care of the boys who left us as they come back. If all industries would try to do the same we think there would not be many of our soldier boys looking for positions and we think the soldiers should be offered the positions they held before leaving for the army.

Mr. Martin's letter was accompanied by a form letter which has been sent through the War Department to all former employees congratulating these men upon their share in the great victory for democracy, and assuring them that they have not been forgotten by the company and that the old positions, whatever they might have been, are being held open for them on their return.

Another interesting letter is from Dr. David T. Day, one of the best-known officials of the Bureau of Mines, who is now developing an oil shale experimental plant in California. Dr. Day is determined to use in his experimental work only maimed soldiers—those who have lost either a leg or an arm. He is determined to pay \$4.50 per day per man during the training period and \$7 per day as soon as training is complete. He asks for ten or twelve immediately and

advises that he can use twenty more within ninety days. The American Mining Congress places all of this information in the hands of the Labor Department Committee, which is cooperating with the War Department in the placing of returned soldiers, but in the case of Dr. Day's communication, the information was placed directly in the hands of officials in charge of the reconstruction work among soldiers.

### LEAGUES BY HEMISPHERES

Within the month the constitution of the League of Nations has been made public. Perhaps it is a misnomer to call it a constitution. It is rather an essay on international obligations and a declaration of purpose by different peoples, written somewhat in the form of a constitution. It is, all told, a curious document, tentative, optional in provisions, and the language is such as to take the teeth out of the whole instrument.

Still as a declaration of purpose its potentialities have alarmed the Senate and aroused the American people.

A critical study of the document itself taken in connection with the criticisms and explanation of it by the French and English shows that its main purpose is to make it difficult for Germany to get outside its territory and make it easy for the Allies to get into Germany over the territory of neutrals without violating their neutrality. As one Frenchman expressed it: The Allies have incorporated themselves and called themselves a League of Nations for the purpose of holding Germany perpetually at check.

If Germany is the only menace to the world of peace and if the aim is to prevent a repetition of the war of 1914 the present League of Nations probably serves that purpose. What arouses the alarm is the possible application of that European device to American conditions.

We have no Germany here that needs to be invaded or kept within its territory or bounds. In fact, the device does not fit conditions on the Western Hemisphere and is not likely to. At the same time, it is apparent that no device responsive to American conditions might possibly be advisable.

While admitting that the constitution does not respond to situations in the West, the people in the West are favorable to the purposes of the League of Nations. They are heartily sick of the war. They want to prevent its recurrence. They want a force that will hold the insane leaders of the world in check in case they should decide to plunge the world into another catastrophe. Therefore the western people are willing to use their force, whether military or economic, to that end.

As a net result of its thought on the subject, America is beginning to believe that instead of a League of Nations we need Leagues of Nations by Hemispheres. That is, the present constitution and method of procedure fits the situation in Europe and thereby fits the situation in Asia and Africa. However, a different constitution with a different method of procedure, although headed in the same direction, is needed for the League of Nations of the Western Hemisphere. For this reason the American people are beginning to believe that there should be two leagues instead of one. They believe there should be two constitutions and two methods of procedure, each responsive to the conditions which it attempts to control.

There is nothing inharmonious in this idea of two Leagues of Nations by Hemispheres. This is so because there is no reason why two leagues differently constituted could not cooperate to prevent the disturbance of the peace of the world by using both their economic and military forces in conjunction if the peace of the world were threatened.

The upshot of the matter is that while America subscribes to the theory of the League of Nations, it is not willing to surrender its Monroe Doctrine to become a part of a league which is designed to meet the European situation only. It will do the same thing, accomplish the same result, by having a League of Nations of the Western Hemisphere to cooperate with the League of Nations of the Eastern Hemisphere.

## PETROLEUM PROVED TO BE LIFE BLOOD OF VICTORY

### Allied Officials Pay High Tribute to Efficiency of American Oil Industry for Work Done During War.

How deliveries of American gasoline in quantities on the western front alone prevented alterations in the plan of campaign which forced the Central Powers to an armistice has been revealed in official documents made public by the United States Fuel Administration.

Less than sixty days before the armistice was signed, it was disclosed, the situation hung in the balance—just when the American people were accustoming themselves to their voluntary relinquishment of Sunday automobile rides, and the observation of "gasolineless Sundays." But for this and other sacrifices, and the stimulation and direction of production, what might have happened was indicated in a blunt cablegram from Marshal Foch, saying simply:

"If you don't keep up your petroleum system we shall lose the war."

A still more serious cable was received October 1. It said, in part:

"Senator Berenger writes: 'Highest command informs him that position has become so serious that change in military operations will have to be contemplated unless increased deliveries of gasoline at front are made possible.'"

Eighty per cent of the Allied requirements of petroleum products, the Earl of Curzon pointed out in a statement made November 21, was furnished by the United States, and Walter H. Long, British Secretary of State for the Colonies, sent special thanks for the work of the Fuel Administration in providing oil, and the activities of the American oil industry.

Of this fuel, of which the American people supplied four-fifths, Senator Berenger declared, "petroleum will have played as great a part in the victory as blood itself and will have proved the life blood of victory;" and Sir John Cadman, British Petroleum Executive, used identical words, writing: "Oil fuel was the life-blood of the navy."

Appreciations of America's splendid and successful efforts to provide this "life-blood" on land and sea also were received from E. D. Hewan, Oil Executive of the British Ministry of Shipping; Camillo Ceruti of the Italian military mission, and other high officials among the Allies.

The shipment of gasoline and other petroleum products so promptly and in such large quantities was made possible only by the patriotic efforts of the petroleum industry working through the National Petroleum War Service Committee in harmonious cooperation with the Fuel Administration.

## PRODUCERS OF THE MORE IMPORTANT WAR MINERALS ARE TO GET RELIEF

Producers of manganese, chrome, pyrites and tungsten who lost money in their efforts to comply with government requests will be compensated if they can establish their claims. After much wrangling the conferees agreed to limit the metals to the four mentioned and the appropriation to \$8,500,000.

When the provision came before the House it was the occasion of extended debate. As representative, in a general way, of the arguments presented, extracts from the remarks of Representatives Wingo of Arkansas and Hamlin of Missouri, are reproduced in part. Representative Wingo said:

"I am in favor of the provision for two reasons. One of them is that I believe it is the duty of the Government, the same as an individual, to meet its moral obligations. The other reason is a practical one from the standpoint of the Government. The gentlemen arguing against this proposition say why do not you bring in a separate bill? If you vote down this proposition today and there is not some provision made for the settlement of these claims, mark my prediction, these valid contracts that no man can investigate and honestly say that the Government ought not to pay will be used as a peg upon which bad claims will creep to this House during the next fifteen or twenty years, and sooner or later you are coming in with an omnibus bill that will carry many times the few millions of dollars that will be paid out under this bill. I did not like to vote for the original bill, but I finally came to the conclusion it was to the interest of the Government from a monetary standpoint to clean these matters up now while the issues are fresh, while the officials are present and while all the evidence is available, to get them out of the way. Now, what is involved in this? The only question it involves is this: Are you going to undertake to meet the moral obligation of an informal contract, illegal contracts, if you please, made by one department of the Government, attached as a provision on a bill providing for the same kind of contracts in another department of the Government? If I had my way about it I would write a general bill which would require all these claims of every class to come in and be presented within the next six months and thus clean them up and get them out of the way and not consume the time of this Congress during the next twenty years in undertaking to consider the claims. Some gentleman said: 'What authority did these gentlemen have to make these claimants do what they did?' I will tell you what they had, the strongest authority that ever existed in this country,

the authority which existed during this war and that was the fear of your Government, the fear of being called a slacker. Why I know of one instance where one of these representatives went to a farmer who had a small deposit on his land and he said: 'You must either go to work and get this out or we will take charge of your farm.' He said: 'By what authority am I required to do that?' He had a copy of the bill that this House passed months before, and he said: 'This bill is still pending in the Senate, and the President has written a letter for it. It is going to pass. You will either do this or we will take away your property.' Tell me, is that not the strongest authority that any man would recognize during these trying times, the demand of his Government to do something for the prosecution of the war?

"Oh, but the gentleman says these claims are based on newspaper advertisements. I deny it. I am opposed to allowing such claims, and the pending proposal excludes them by limiting relief to claims based upon personal solicitations, personal inducements and personal orders of government representatives. I wish to God that every contract that will be settled under the War Department provision will be as clean as the contracts that Mr. Lane will settle under section 7. Gentlemen talk of the original bill that passed this House—the war contract bill—covering only those cases where they had a contract of some kind a little bit informal. Oh, no; you are going to take care of cases like this where a man, a department employe, sits here in Washington and calls up contractors and orders without limit their output. 'What is your price? We are not fixing any price: send in the goods and your cost sheets and then we will fix your price.' They will settle claims where there was not even a price agreed upon, in some instances. You tell me you are going to settle these claims and pay the bill and talk about the authority to settle claims with the little owners throughout the country. I have not one in my district of which I know. I would be ashamed of our Government if it should say it would settle the claims of these big war contractors and then say to a man like the old man Bill Oldfield talked about: 'There is no legal obligation; nothing but a moral obligation; and the Government does not meet its moral obligations.' A government that will not meet its moral obligations falls into contempt."

Mr. Hamlin, who opposed the relief asked, said, among other things:

"The other day, when this bill was sought to be sent to conference, I insisted that the

conferees ought to give assurance to the House that this amendment of the Senate, known as section 7, should not be agreed to in conference without first giving the House an opportunity to know something about it. I did not at that time say, and do not now say, that all these proposed claims are without merit; that the Government is not under a moral obligation to make compensation in certain cases; but I did say that we ought not to establish a precedent in this House of subjecting \$50,000,000 to the payment of claims, the validity of which the House had never for one moment considered one way or the other. Now, the trouble of the matter is that there is a wrong impression, in my judgment, in the House as to the character of claims which would come under section 7, as compared with those in the other portion of the bill.

"There is not a single proposition included in what is known as the war-validating contract portion of this bill, and which bill was carefully considered by the House, that does not rest upon a contract of some kind, either a perfected contract under the law or a contract informally made by some one who had authority to make a formal and valid contract. But the Secretary of War is not authorized to compromise and settle a single claim that does not rest upon some such contract. That is the point. The difference between that class of claims and those embraced in section 7 is that no contracts were ever made with these mine owners by the Government, neither could have been made, for Congress had not authorized them. If the Secretary of the Interior had wanted to make a contract with one of these fellows he could not have done so, because he was not authorized by law to do it. Consequently not one single one of these claims mentioned in section 7 rests upon a legal foundation, but if they exist at all they must rest wholly on moral grounds, and the fellows who are pressing these claims recognize that fact to be true. Why, bless your soul, as soon as this war-validating-claim bill was introduced in this House these mine owners made a grand rush upon the Capitol that would do credit to any football team in existence and landed down here in the conference room of the Bureau of Mines. Not knowing exactly what they wanted they proceeded to organize themselves into a convention, and after proceeding awhile they finally concluded, as one of them expressed it, that since other people are being taken care of by the Government he could not see why they should not 'get theirs'—that their claims were moral and the Government ought to acknowledge a moral obligation as well as a legal one. That is all there is to it. Now, it may be that there are certain circumstances surrounding some of these particular claims that would warrant the Government in paying them, but, gentlemen, we ought to safeguard that. If you are going to recognize

so-called moral claims that have no foundation in law, then where are you going to stop?"

Section 5 of the contract validation bill as reported by the conferees before the final change read as follows:

"SEC. 5. That the Secretary of the Interior be, and he is hereby, authorized to adjust, pay, or discharge any agreement, express or implied, upon a fair and equitable basis the amount or amounts of money heretofore invested or contracted to be invested and obligations incurred in good faith by any and all persons, firms, or corporations for producing or in good faith acquiring property for producing, within the United States, for the purpose of supplying the urgent needs of the Nation during the war, any ores or mineral substance; mentioned and enumerated in the act entitled "An act to provide further for the national security and defense by encouraging the production, conserving the supply, and controlling the distribution of those ores, metals, and minerals which have formerly been largely imported, or of which there is or may be an inadequate supply"; approved October 5, 1918, the production of which was requested or demanded by the War Industries Board, the War Trade Board, the Shipping Board, the Emergency Fleet Corporation or the Department of the Interior and which has been performed in whole or in part by any such person, firm, or corporation prior to November 12, 1918; and that said Secretary ascertain, determine, adjust, liquidate, and, out of the moneys provided and appropriated by said act, pay to the parties justly entitled thereto the amounts of such losses and damages as he, the said Secretary, shall find and determine to have been sustained by reason of having made said investments for said purposes, and that in each case he shall make such determination, provision, settlement, advancement, or final payment, or by agreement with claimants take such other action as he shall find and determine to be just and equitable; that the decision and action of said Secretary in each case shall be conclusive and final; that all payments shall be made, and all expenses incurred by the said Secretary shall be paid from the funds appropriated by the said act of October 5, 1918, and that said funds and appropriations shall continue to be available for said purposes until such time as the said Secretary shall have fully exercised the authority hereby granted and performed and completed the duties hereby provided and imposed: *Provided*, however, that said Secretary shall consider, approve, and dispose of only such claims as shall be made hereunder and filed with the Department of the Interior within three months from and after the approval of this act.

That a report of all operations under this section, including receipts and disbursements, shall be made to Congress on or before the first Monday in December of each year.

That nothing in this section shall be construed to confer jurisdiction upon any court to entertain a suit against the United States.

**COAL REGULATION ENDS;****NO PRICE CHANGES RESULT**

Suspension of maximum prices on anthracite coal together with all other coal and coke regulations except three, went into effect quietly February 1, following a blanket order issued by the United States Fuel Administrator, Harry A. Garfield. There was no appreciable effect on prices.

The only restrictions not suspended, as to coke and all coal, are:

Those requiring that contracts be made subject to maximum prices if reinstated, subject to cancellation by the Fuel Administration and subject to requisition or diversion of coal by the Fuel Administration.

Those prohibiting reconsignments of coal.

Those requiring shipments of coal to tidewater to go through the Tidewater Coal Exchange.

The tidewater and reconsignment regulations were retained at the request of the Railroad Administration, to avoid congestion of coal at tidewater, and the resultant embargoes.

Mr. Garfield's order includes the suspension of price and zone regulations on coke and bituminous coal which, it was announced January 17, would be effective February 1. As the Administration's control of the oil industry already has been suspended with the exception of certain natural gas regulations, the effect of the order was said to be that the Fuel Administration's controls are now relaxed to the present limit of safety, pending the proclamation of peace, when the administration automatically will terminate.

It was pointed out that as the responsibilities of the Fuel Administration under the Lever Act, continue as long as a state of war officially exists, any of these suspended regulations may be reinstated or others may be put into effect should occasion arise. An instance of the continuing activities of the Administration was found in its Bureau of Labor, which will function actively during the armistice. Any dispute failing in settlement between the parties at interest must be submitted as heretofore, to the Fuel Administration, for final disposition without stoppage of work.

**OIL AND GAS CONCERNS****REQUIRED TO MAKE REPORTS**

Licensees engaged in the importation, manufacture and distribution of petroleum and its products and natural gas, from whom statistical reports have hitherto been requested, have been notified in an order issued by the United States Fuel Administration that all such reports must be filed on or before February 23, and that failure to do so will be treated as a violation of rules and regulations under strict enforcement. The order says:

"All licensees from whom statistical reports have heretofore been requested, to be made to either the Bureau of Mines or the United States Fuel Administration, and who have not



L. R. ATWOOD

Another of those long associated with the mining industry who rendered invaluable service to the Government during the war.

filed such reports, are hereby notified that all of said reports must be filed on or before February 23, 1919, that this order will be strictly enforced, and that any failure to comply therewith will be treated as a violation of Rule Ten of the Rules and Regulations Governing Licensees Engaged in the Business of Importing, Manufacturing, Distributing, and Transporting Crude Oil, Fuel Oil, Gas Oil, Kerosene, Gasoline, and Natural Gas contained in Publication No. 28 and issued on the 24th day of September, 1918, and will subject the violator to the penalties provided by the law.

"If good and sufficient reason exists why a report of any licensee cannot be furnished within the time fixed, an extension of time may be obtained, provided the application therefor is promptly made and such extension granted prior to February 23, 1919."

**Natural Gas Regulations Not Cancelled**

Owing to an apparent misapprehension in some quarters to the effect that the suspension of certain fuel regulations effective February 1 applied to commodities other than coal and coke, a statement was issued by the United States Fuel Administration February 11, calling attention to the fact that natural gas regulations were not cancelled by that order.



## GENERAL MINERAL LEASING BILL TALKED TO DEATH BY LA FOLLETTE

Senator La Follette of Wisconsin took upon his own shoulders the responsibility for defeating the mineral leasing bill. He deliberately took up all the time allotted to the consideration of the measure, thereby making its passage impossible.

Senator Pittman worked like a Trojan in his effort to get action on the conference report. In one of his many speeches he said:

"The important part of this bill is the provision looking to the discovery of new oil fields. That was the purpose of the act. The Standard Oil Co. already owns under patents sufficient oil to satisfy its needs. It is the thousands of other prospectors in this country, it is the independents, whom you want to draw into this field of enterprise. Now, what is your plan? What is your plan of developing oil fields, of discovering oil fields? Do you think for one moment that the Government today owns an oil field? If it did, why does it not set it aside for the Navy? When their experts came before the Committee on Naval Affairs in regard to naval reserves they asked us to set aside 6,000,000 acres of oil lands described by geologists. Why do you not set aside 100,000 acres of that for Navy and develop it. They said, 'Because we do not know whether there is oil there or not. It will cost us \$50,000 a well to find out whether there is oil, and we may sink 100 wells and never find it.' Yet 6,000,000 acres of that land that the Government itself is afraid to prospect have been withdrawn from entry for nearly nine years. What is your plan for developing it? Have you got any?"

"I say to you this Congress has worked untiringly through its committees in attempting to devise a fair plan for the discovery of new oil fields, for the development of the so-called 6,000,000 acres of oil land. After six long years we have agreed on this plan, which is partial title and partial leasing. They allow a man to take a prospecting permit on the public land of not to exceed 1,280 acres, 640 acres if it is within 10 miles of a known oil well, or 2,560 acres if it is over 10 miles from a known oil well. He is required to develop that. He is required to expend his own money, his own time. If he makes a failure, he gets nothing. If he makes a discovery, the people of this country are enriched by additional oil supplies and a new competitor has been found for the Standard Oil Co.

"The Standard Oil Co. will acquire that oil? Yes; but for one-fourth that the man

gets a patent to, there are three-fourths that the Government leases and keeps under control forever through the leasing system.

"That only applies to discoveries, mind you. That only applies to something that the Government has not got. When you get down to the known oil fields, this straight leasing system and nothing but the leasing system, with perpetual government control, continues to exist under this bill."

### SMOOT OPPOSES BILL

In opposing the conference report, Senator Smoot, among other things, said:

"I refused to sign this conference report. Having done so I think it no more than right that I should call the attention of the Senate to some of the reasons for my refusal.

"The Senator from Nevada (Mr. Pittman) says this bill has passed the Senate three times and the House three times. Mr. President, a bill has passed the Senate three times and a bill has passed the House three times, but the bill as reported in this conference report never passed the House until the conference report was adopted by it the other day and it has never passed the Senate.

"There is a provision in the bill as reported by the conference for leasing and for selling coal lands in the United States under certain conditions, but as far as the sale of coal lands under this bill is concerned there is no material difference from existing law. There is a difference from the wording of the law, but the result will be no change whatever.

"The Secretary of the Interior, through the Geological Survey, has made an examination of all coal lands withdrawn from entry, and if the examination is not made at the time a citizen of the United States desires to enter coal land, a request is made for an examination for the purpose of determining the value per acre of said land. When the Geological Survey makes a report upon the value of the land, then if the entryman desires to purchase at the valuation reported by the Geological Survey he has a right, or he and his associates, to enter 640 acres of coal land and purchase the same, provided the price per acre is agreed upon. But it is not mandatory upon the Secretary of the Interior that the price fixed by the Geological Survey shall be paid for the coal land. As I stated to the Senator from Nevada, I know of compromises that have been made and the lands have been purchased.



"We do not want to deceive ourselves in relation to this provision. It simply means that if the Secretary of the Interior does not want to sell any coal lands in the United States they are not going to be sold any more than they are today.

"I remember very well when the leasing system was first talked of in the United States. I was positive at that time that if the policy were proposed and there was opposition to it the domain of the Western States would be withdrawn and withheld from development until the people of those states yielded to a leasing system as demanded by the heads of some of the bureaus of the Interior Department. I was told that that would be the policy if it took 20 years to bring it about; and that was 12 years ago.

"I would prefer to say to my people: 'Bear your burdens a little longer; there is help coming.' I have not any doubt but that we could pass through the Senate of the United States today a bill giving to the states of the Union all the public lands in the states. I doubt very much whether such a bill could pass the House, but the sentiment in favor of it is growing, and when the people of the United States understand what the people of the West have passed through for the last 15 or 20 years I have too much confidence in the good judgment and absolute justice of the American people to think for a minute that they will not rectify the wrongs done."

#### NATURAL GAS ORDER MAY BE MODIFIED IN MIDDLE WEST

The United States Fuel Administration has under consideration an application for the modification of an order issued by it on December 12, limiting the supply of natural gas to be furnished during the winter months to various communities in Ohio and Indiana. A hearing on the question was held in Pittsburgh, but no decision was reached, because the officials of the company, through whose mains the supply flows, were unprepared to give an approximate estimate of the amount of the surplus supply which they claim to have at present, under the prevailing weather conditions.

The Reserve Natural Gas Company of West Virginia supplies the Logan Natural Gas & Fuel Company of Ohio, which carries and distributes this supply across the state, and delivers in turn to the Central Indiana Gas Company and other Indiana companies for distribution in that state.

The hearing held in Pittsburgh was called at the request of the Logan and the Central Indiana companies, who asked for a modification of the order issued by the Fuel Administration on December 12, which directed the discontinuance of supply during the winter to consumers classified in a lower class than

Class III, unless otherwise ordered. Classes I, II, and III include domestic and other uses defined as most essential.

This order was the result of a hearing held at the Fuel Administration in Washington on December 10. At that hearing it was conceded that the supply was inadequate during winter weather to meet the demands made upon it.

A decision in the matter was not reached at the Pittsburgh hearing, because the Logan Company officials were unable to give an approximate estimate of the amount of the surplus supply, which they claim to have available at present. Such an estimate is readily obtainable, and the officials have agreed to furnish approximate figures on the existing average surplus within a few days. While they declared that their surplus is sufficient to furnish a restricted supply to certain industries classed lower than Class III, it was pointed out that estimates of the probable amount of surplus should be prepared before details in connection with modification of the order can be decided.

Among those at the conference were the State Fuel Administrator of West Virginia, the Public Service Commissioner of Indiana, and numerous city officials from various communities in Indiana.

**Tin.**—The tin situation in this country continues inactive and unsettled, caused mainly by the large stocks in the hands of the Government and of large consumers, and the restrictions on imports, except ore purchases by domestic smelters.

In this country there are at present two companies prospecting tin deposits—one in Rockbridge County, Va., and the other in the Black Hills, S. Dak. The Virginia deposit, which was tied up in a legal tangle, was commandeered by the War Department, and later turned over to a Boston company to develop. Work was started about the first of October, 1918, to clean out some of the old workings, and was still under way at last report.

Near Hill City, S. Dak., the Cowboy mine, formerly owned by the Harney Park Company, was acquired by a St. Louis company about two years ago, and the work of unwatering the old shaft was begun. Financial difficulties caused the work to be suspended for a time, but it was recently reported again under way.

**Gold.**—With reduced purchasing value of the dollar most of the gold mines of the country have suffered rather severely. They have found difficulty in meeting the high wage scale in force at the metal camps; their operations have consequently been curtailed, and their profits have diminished. Gold mines have, however, a free market for their product, and any improvement in the labor situation is likely to be reflected in increased production of gold.

### GOVERNMENT AID FOR GOLD MINING IS DISAPPROVED

Reporting to the Secretary of the Treasury on the gold situation, the committee headed by Albert Strauss submitted the following finding:

On November 2, 1918, your predecessor appointed the undersigned a committee to investigate present conditions in the gold mining industry and to study the problem carefully and thoroughly with a view to definitely ascertaining all the difficulties confronting gold production and submitting suggestions of sane and sound methods of relief.

The nature of the problem submitted to the committee was well stated in the letter of Secretary McAdoo to Delegate Sulzer of Alaska, under date of June 10, 1918, to which reference has been made in almost all resolutions or discussions of the subject since that time. That letter is reproduced herewith.

At that time the war was at its height and there was every prospect of a prolonged war. Contrary to the belief apparently entertained in many quarters, the structure of banking credit in any country during war time does not depend very much, if at all, on the amount of gold that can be made available as a reserve for that structure. Undoubtedly the rise in prices in this country since 1914 is to a great extent due to the heavy importations of gold during 1915 and 1916, but it does not follow that the export of a corresponding amount of gold at the present time would operate to bring down prices. As a matter of fact it is the judgment of this committee that it would not so operate until we have reached or approached normal peace conditions. In time of peace the gold reserve is undoubtedly an important factor in controlling the credit structure but in time of war that structure is determined by other causes. This distinction is sometimes overlooked and much inaccurate thinking is due to this oversight. Under war conditions the imperative necessity of the Government for the production of war essentials determines government expenditure, and this expenditure cannot be modified to meet the banking needs of the country; on the contrary, the banking policies of the country must conform to the fiscal policy of the Government. Under these circumstances, the only way in which the expansion of banking credits can be checked is by a reduction of civil demands to correspond with the expanding needs for government expenditure. The credit saved through this reduction of civil demands becomes available to the Government through the purchase of government securities, or through the payment of taxes. To the extent to which such saving and resulting investment does not take place, government obligations must be taken by the banks, giving rise to credits to the Government which create additional purchasing power for the use of the Government. This additional purchasing

power, in turn, competes with the demands of private individuals, driving up prices against the Government and against the civil consumer and ultimately impairs the individual's purchasing power to an amount roughly equivalent to the impairment that might better have been brought about through voluntary saving. The credit structure thus erected depends inevitably upon government needs and upon the willingness and ability of the community to impose upon itself voluntary restraint in expenditure. In other words, the structure will be high if the community fails to save.

The results in saving achieved in the United States were remarkable but no program of saving can be instantly put into effect and the expansion of the credit structure that took place under these circumstances was inevitable and could not have been controlled through any reduction in the gold reserve.

This being so and a long war being believed in prospect, it was important to maintain a strong gold reserve in order that there might be no impairment of confidence in the convertibility of our currency and in our ability ultimately to settle any international indebtedness in gold.

The cessation of hostilities has radically changed the situation, and, with the change in the situation, any need of particular effort to promote or stimulate our gold production which may have existed has ceased. There is now no danger of an impairment of confidence. The dimensions of our financial problems are becoming clear and we know that we can, without permanent strain, meet any financial requirement the Government will be willing to assume. Some further expansion of credit may result from our expenditures for demobilization and readjustment, but we can look forward to a comparatively early contraction of our credit structure with the attending circumstances of a free gold market and a gold reserve that shall once more perform its normal function of regulating credit conditions. That movement will, we believe, be both preceded and accompanied by lower commodity prices.

Under these circumstances there is in our opinion no need for artificial stimulation of gold production. Not only has any need therefore passed, but there have come into operation causes that will in due time restore all industry, including the mining of gold, to a normal basis. Gold mining will then become again normally profitable and respond automatically to normal stimuli.

It is therefore the judgment of this committee that no steps should be taken by the Government to stimulate or promote the production of gold.

The representatives of the gold mining interests very properly based their suggestions for relief on the public necessity for a larger production of gold and not on the hardships suffered by them as parties interested in an industry in which the margin of profit had

been rapidly shrinking, and in many cases had entirely disappeared or been turned into a loss. They recognized that such diminishing profits and such losses were inevitable under the shifting conditions of war, and that merely as producers they had no better claim to relief than any other section of the community suffering a reduction of profits or incurring losses under the changing incidence of war conditions.

In the course of its consideration of the subject referred to it, this committee has conferred with a committee appointed by the American Gold Conference held at Reno in August, 1918, under the presidency of Governor Emmet D. Boyle, of Nevada; it has had the benefit of the very complete survey of the conditions of the gold mining industry contained in the report dated October 30, 1918, of the committee appointed by the Secretary of the Interior to study the gold situation, of which Hennen Jennings, Esq., was chairman; and of the report dated November 29, 1918, of the Gold Production Committee appointed by the Commissioners of the British Treasury under the chairmanship of Lord Inchcape; they have conferred with or secured the views of Prof. Irving Fisher and other eminent economists, besides which they have had referred to them a considerable volume of correspondence expressing widely varying views which had been received by the Secretary of the Treasury and the Director of the Mint.

It is interesting to note that the British Treasury Committee arrived at the same conclusion as that which we have reached.

We cannot refrain from expressing gratification at the substantial unanimity of opinion among those whose position or experience entitles their views to respectful consideration against suggested measures of relief that would have had a tendency to undermine or upset our standards of value.

The report is signed by: Albert Strauss, Edwin F. Gay, Raymond T. Baker, Emmet D. Boyle and Pope Yeatman.

#### **TIDEWATER SHIPMENTS NO LONGER MUST GO THROUGH EXCHANGE**

The issuance of a formal order, effective after February 28, suspending an order requiring shipments of coal to tidewater to go through the Tidewater Coal Exchange, and also suspending an order prohibiting reconsignments of coal was announced February 21 by the United States Fuel Administration. Notice was given on February 17 that this order would be issued.

Suspension of the Fuel Administration requirements compelling shippers to operate through Tidewater Exchange in nowise affect the continued operation of the Tidewater Coal Exchange through any voluntary arrangements made by shippers and the Railroad Administration.

The order directs "that the order dated November 6, 1917, entitled 'Order relative to tidewater transshipment of coal at Hampton Roads, Baltimore, Philadelphia and New York, and for the employment of and cooperation with the Tidewater Coal Exchange, as a common agency to facilitate trans-shipment and to reduce delays in the use of coal cars and coal carrying vessels,' and the order of said Administrator dated January 31, 1919, prohibiting the shipment of coal for reconsignment, be, and each of said orders and the operation and effect thereof, is hereby suspended, until other or further order in the premises by the President of the United States, the United States Fuel Administrator, or other agency created by the President under said Act, in respect to all coal sold, shipped or distributed after February 28, 1919."

#### **TO INVESTIGATE NATURAL GAS SITUATION OF ARKANSAS**

At a meeting of representatives of those interested in the natural gas situation in the state of Arkansas, the United States Fuel Administration announced that it would be very glad to cooperate in an endeavor to ascertain the exact facts concerning the situation in that state. The assistance of the Bureau of Mines and the Geological Survey has been asked in placing at the disposal of the Fuel Administration some of their experts to serve on a board of investigation.

The conference was the result of the adoption of resolutions by the Arkansas Gas Users' Associations at Little Rock. In connection with the allegations made in the resolutions, it was decided that an investigation be made upon the following lines:

First.—Whether the Arkansas Natural Gas Company has made and is making reasonable efforts to obtain and maintain an adequate supply of gas (this to involve the question of the relations with other companies in so far as it relates to the amounts of gas obtainable from them or to be delivered to them).

Second.—The adequacy of the distribution system of the company considered in connection with the business offering to the distribution lines and the density of population of territory served.

Third.—Whether the company has used and is using due diligence to maintain its property in reasonably good operative condition, and is the line of reasonably good construction.

Fourth.—What is the probable life of the territory from which the Arkansas Company is now drawing its supply, and are wasteful methods being practiced in that field, and by whom?

The conference was attended by officials of the Arkansas Gas Company, also by the state fuel administrator of Arkansas and his executive secretary, and by the secretary of the Gas Users' Association.



SENATOR HENDERSON

Who made a strenuous effort to put through the potash bill and who now is urging the War Trade Board to restrict potash imports.

#### J. O. LEWIS NAMED CHIEF PETROLEUM TECHNOLOGIST

J. O. Lewis, superintendent of the petroleum experiment station at Bartlesville, Okla., has been appointed chief petroleum technologist of the Bureau of Mines, Department of the Interior, in place of Chester Naramore, who has resigned from the government service to join the Union Petroleum Company, with headquarters at Philadelphia, Pa.

Mr. Naramore joined the petroleum division of the Bureau of Mines September 26, 1916, and on January 1, 1917, was placed in charge of the entire petroleum work, succeeding W. A. Williams.

In addition to being the executive officer of the petroleum division during a time of war when the demands on the petroleum industry were larger than ever before, Mr. Naramore saw overseas service as a representative of the United States Shipping Board and Fuel Administration, and held conferences with the allied nations at London, Paris and Rome on an adequate supply of petroleum for all the allies. The results of this work are said to have been a factor in the winning of the war.

Mr. Lewis, his successor, is a graduate of Stanford University in the class of 1909.

After graduation he worked in the geologic department of the Associated Oil Company of California, during which time he made a study of the oil operations in the California field as well as in the Calgary fields of Canada during 1914. Mr. Lewis came to the government service on October 1, 1914, and served as oil and gas inspector at Muskogee, Okla., for one year. After that he was transferred to the Bureau of Mines staff, where he continued his investigation in behalf of the industry. On January 1, 1918, he was transferred as superintendent of the petroleum experiment station at Bartlesville, which position he held until his appointment as chief petroleum technologist. He is the author of a number of publications of interest to the petroleum industry, such as Bulletins 134, "The Use of Mud-Laden Fluid in Oil and Gas Wells," and 148, "Methods of Increasing the Recovery of Oil from Wells," and Technical Paper 130, "Underground Wastes in Oil and Gas Fields and Methods of Prevention."

Mr. Lewis will be succeeded at Bartlesville by W. P. Dykema, petroleum engineer of the bureau.

#### DISPOSAL OF GOVERNMENT'S NITRATE IS DECIDED UPON

A meeting for the purpose of taking up the matter of the disposition of surplus stocks of sodium nitrate in this country was held in the office of the director of sales and was attended by a representative of the War Trade Board, a representative of the War Industries Board, and Nitrate Committee, and representatives of the sales office.

It developed at this meeting that the Government has a surplus of approximately 226,000 tons of sodium nitrate in the United States and 120,000 tons in Chile. It was decided that the importers should dispose of the surplus in this country and that the Government should endeavor to dispose of the surplus in Chile to foreign interests. A committee was appointed by the Nitrate Committee to draw up an offer to the Government to buy the surplus nitrate, the Government to allow them a certain fixed amount per ton to cover cost of selling.

The operation outlined is simply a continuation of the method under which the consumers have obtained sodium nitrate through the importers since November, 1917. The same importers who brought the sodium nitrate into the country for distribution to consumers are now disposing of the surplus on exactly the same basis as previously outlined by the War Industries and War Trade Boards. The importers, who will have the responsibility for the sale of the surplus, are still held out of the primary market for shipment to the United States pending the distribution and sale of this surplus, or until import restrictions are removed by the signing of peace.

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## PERKIN MEDAL AWARDED TO DR. FREDERICK G. COTTRELL

Dr. Frederick G. Cottrell, Chief Metallurgist of the Bureau of Mines, Department of the Interior, has been presented with the Perkin medal for distinguished service in chemical research. Dr. Cottrell, in accepting the honor, outlined certain investigations now being undertaken by the Metallurgical Division of the bureau, which, if successful, will result in a real revolution in the fundamental industries of the country.

Dr. Cottrell, in telling the chemists of this important work, said in part:

"When, at the suggestion of Sir William Ramsay, the British Admiralty first studied the possible use of helium for balloon purposes they felt that the expense of production would be prohibitive. First, on account of the great scarcity of the element and the very

great dilution in which it was found in the atmosphere (1 vol. in 250,000) and in other gases; and, second, because of the expense of the processes of separation then known to the Admiralty.

"When this information came to the U. S. Bureau of Mines it was remembered that some of the natural gases of Kansas had been found by Dr. H. P. Cady, of the University of Kansas to have over 1 per cent of helium in them. The separation of helium from these gases could best be accomplished by the same general processes of liquifaction and distillation as are used to separate air into its nitrogen and oxygen for industrial purposes.

"It so happened that the Metallurgical Division of the Bureau of Mines had been making a study of these processes in the hopes of finding a way to sufficiently cheapen the production of oxygen from the air to allow its general use in metallurgical furnaces and other large scale chemical and industrial operations. If this were possible it would work a real revolution in these fundamental industries. Take, for instance, the smelting industry alone. We now concentrate everything that goes into the furnace (coke, ore, fluxes, etc.) except the oxygen of the air, which we add with four times its volume of inert nitrogen and thus undo much of the effect of the concentration of the other constituents. If we could use pure oxygen, or more concentrated air, a great saving could be effected, and we could do in combustion furnaces much which is now only possible in the electric furnace.

"One of the processes which the Bureau had felt had much promise in this direction had not, up to this time, received any large scale development, but now these facts were all called to the attention of our army and navy, who immediately jointly appropriated first \$100,000, and afterwards further sums now aggregating over \$1,000,000, for trying out the project not only along the line of the new process but also parallel therewith by the older and better known processes as well, and entrusted the general direction of this work to the Bureau of Mines.

"The plants on the older processes are already producing helium in large quantities, and the one on the new and what it is hoped may prove several times more economic basis, is just about to have its practical production test.

"If it fulfills anticipations, its significance is far wider than the production of helium, for it will open the possibility of oxygen in quantities at costs undreamed of by most chemists and metallurgists."

## Alaskan Assessment Work

The House, on February 17, passed the resolution suspending assessment work in Alaska until January 1, 1920.



## POTASH BILL CAUGHT IN LEGISLATIVE JAM DURING LAST DAYS OF SESSION

Senator Henderson's potash bill died with the Sixty-fifth Congress. The bill came before the Senate on the call of the calendar but Senator Waish objected to its consideration on the ground that it is too important to pass without deliberate consideration.

After hearing the opinions of the representatives of the domestic potash producers, the Senate Committee on Mines and Mining reported favorably Senator Henderson's bill providing for a licensing system. The plan is designed to safeguard the domestic industry for two years in the expectation that by that time it would be able to meet foreign competition without tariff protection.

Limitations have been placed on price and not more than one-third of the appropriation is to be expended in any one fiscal year.

Nathan H. Gellert, of Philadelphia, made the following statement to the committee:

"The blast furnace has been mentioned as a source of potash. It perhaps holds one of the most unique positions in potash manufacture in that it is at the present time perhaps the largest producer of potash without getting anything from it. You do not have to change the blast-furnace operation to manufacture potash, because investigations carried on by us indicate that every blast furnace we have ever had anything to do with is making potash now. It is merely a question of collecting the potash that is made. Heretofore the blast furnaces have realized the necessity of cleaning gases and have installed various wet systems of cleaning the gas. These systems are highly expensive, and they are figured in as fixed charges in the cost of operating the furnace and furnish no by-product. Dr. Cottrell, of the Bureau of Mines, several years ago invented a process for collecting dust and fumes from smoke and gases. This process has been developed with a good deal of success for the elimination of the dust nuisance in cement plants and the consequent recovery of potash.

"The first three precipitators of that type to be used in blast furnace work are now under process of construction. While there has been no big work in the collection of potash by the dry system, two blast furnaces are already installing these units. Our investigation on these blast furnaces shows that there is a possible recovery, with a 200-ton furnace, of a ton of potash when it runs on basic iron; 2 tons of potash when it runs on spiegel; and 3 tons of potash, approximately, when it runs on ferromanganese—that is, per day.

"We have conducted experiments with four precipitators in actual running on a semicommercial scale, which indicates that we can recover a dust running as high as 29 per cent of  $K_2O$ , which is higher in potash than material directly from the Alsatian mines. It is necessary to clean the gases; the gases are all inflammable and contain a large amount, in the form of gas, of the coke put in the blast furnace. It is no small factor of economy in iron manufacture, the cleaning of gases by the wet process, because of lack of byproducts, and it reduces the temperature of the gas and consequently there is a tremendous loss of money because of the lack of byproduct and less of sensible heat. If you can clean the gases in their hot, dry condition, you keep all of that heat. We have several blast-furnace men watching very carefully and eagerly the work we are now doing in Dunbar, from the American Manganese Manufacturing Co., and also some work which we are doing in Alabama. Our men are down there now investigating some of the blast furnaces every day.

"Our preliminary investigations, while we have not checked them, indicate that some of those ores run  $1\frac{1}{2}$  per cent of potash, or nearly seven times as much as some of the northern ores. It would be extremely difficult to figure out what it cost to produce potash in a blast furnace. You could not charge up the potash with any of the actual cost. It is necessary to clean the gas, independent of the potash, and our figures still are not conclusive, because they are not based on actual large commercial operation; our figures indicate it would not cost any more to use a precipitator than to wash the gas with water. Therefore, you can really say that the potash costs the iron producer nothing.

"It will be extremely difficult, if not impossible, however, to interest the blast-furnace operator in the installation of a potash-collecting device unless he feels—because there is an element of risk in it—that he will get a rapid and large remuneration when once the industry is started, once his initial investment has been paid off, and he is operating it, and it becomes just an everyday affair with him, and when the market, after five years, becomes purely a competitive one with the foreign market, you will have established perhaps the only source of potash that can be sold at an extremely cheap price, and even produce potash at a price lower than any price Germany can set on its own potash.

"Now, the ores in this country, those that we have examined, indicate that the blast

furnace alone, if every blast furnace in the country became a collector of potash, could supply practically the entire needs of the country. It is not possible, of course, to figure that every blast furnace in the country will become a collector of potash, but between the cement mills and the blast furnaces you will have a source of potash that can readily compete, after it has been established, with the German potash. The blast furnace, of course, produces its potash at practically nothing; the cement mill, of course, produces potash at a cost, as the charge of the collection must be put against the potash.

"We have some people who are very much interested in blast furnaces, people very much interested in installing precipitators. When the armistice was signed there was practically no market for potash, and we have offered 125 tons of dust containing 12 per cent of potash for sale, and we cannot find a market for it, although we know potash is needed in the country. When this market was entirely broken up, these blast-furnace operators simply said, 'Well, let's wait; let us see. What do you think potash is going to be selling for?' Well, it is impossible to estimate. I told them that perhaps it might go as low as \$1 a unit, and they are not interested—\$1 a unit, with the risk of the cost of the investment; and while we have not proven that this precipitator can do the work, it seems it can, but yet there is enough element of risk and they will not put up the money."

W. E. Sharp, of Lincoln, Nebr., in the course of his testimony said:

"What the effect might be in event this or some similar measure were not enacted I could not tell. The potash companies do not want to liquidate, as do the manganese, chrome, and pyrites. Sometimes when you are in the middle of a stream, you find it is about as far to turn around and go back as it is to go on. American potash producers have invested almost \$50,000,000 in their industry, and believe they need but two or three years to reach a basis that will enable them to compete with German potash. To turn back and liquidate would cost the Government almost \$50,000,000; yet the Government by safeguarding the industry temporarily can enable it to become in two or three years a permanent one, supplying our entire domestic demand, and rendering our country entirely independent of foreign potash.

"If those are called, the potash goes into the market. If the American plants now facing bankruptcy are wrecked by war-prisoner Germany potash, it means that next year we are in such position that we will have to buy the foreign potash almost exclusively, and when that time has come and the industry is killed in this country, then who will say what the price is going

to be? How much can the foreigner raise the price? And who will say, if we get into another war, where we will get the potash if the American potash-reduction plants are now destroyed?

"Therefore, they ought to be kept in existence and the industry stabilized under the provisions of this potash bill.

"American potash producers do not want to ask for liquidation; we just ask to live, just to be safeguarded two years until our plants are on a basis to successfully meet German competition.

"And I want to know if that isn't the true American spirit? We have not asked for any assistance from the Government in financing these plants, although the Government went out, as you know, to the coast and put in a plant itself to help recover kelp potash because of its necessities. We simply say to you gentlemen that we want you to allow us to produce potash and live until we are established with our industry."

Senator Henderson, in opening the hearing, said, in part:

"This committee is here to inquire into the possibilities of an independent American potash production. In a general way we have assimilated the doctrine that Germany, and only Germany, can produce the potash which this country requires. We know, in a general way, that potash is an absolute essential for the production of cotton, on which the world largely depends for its clothing. In a general way we know that on potash we rely for the full capacity of our soil's agricultural production. Also, in a general way, we know that on potash we depend for our war-time ammunitions, and that there would be no shrapnel or high explosives without it. We know that potash is a most necessary ingredient in the process of gold production. We shall expect you gentlemen to inform us intimately with the uses of potash in all of these directions.

"Generally, we are informed that on account of the dire need of potash, American ingenuity has to some extent met the situation. We know that the Geological Survey, the Bureau of Mines, and the Bureau of Soils have investigated the potash possibilities of the country, and have paved the way for a domestic production. We understand that the refuse from sugar mills, blast furnaces, and cement plants contain a large quantity of potash which can be saved against the needs of the country. We know that at Searles Lake, and in Nebraska, in Utah, and elsewhere, there exist immense deposits of potash in varying form. We understand that all of these can be sufficiently developed to a point where the United States will be dependent on no one for its potash, and we hope you gentlemen may point the way.

"We have been informed that some millions have been invested with a view to domestic

production of potash. A large part of this money was spent on account of our war-time necessities, but it appears we have an opportunity to save this money from being checked off as a war waste, and redeem it for the victories of peace.

"There are at present at this hearing representatives of all of the potash producers of the country. At least, all of the industries producing potash have their representatives here. The Government experts are also here. The committee would like to hear from you all. I will say that it was an occasion for amazement to me to learn that Alabama, California, Colorado, Illinois, Louisiana, Massachusetts, Maryland, Minnesota, Montana, Nebraska, New York, Ohio, Pennsylvania, Wisconsin and Utah were potash-producing states. Certainly where there are so many of our states, and in such widely distributed localities, in which potash can be produced, it is the part of wisdom to foster the industry, and rear it jealously. We must have the chemical. If it can be produced in this country, we should do it, and we look to you gentlemen to point the way.

"Congress should be informed of conditions in this regard; we should know exactly where and why we need it; we should know where and how it can be obtained in this country, and at what cost, and we should do all in our power to render America independent of the world, so far as potash is concerned."

#### Coal Loadings

A report has been received by the Director General from the car service section of the Railroad Administration on the quantity of coal of all kinds loaded by roads for the week ended February 1, 1919, as compared with the same period of 1918. A summary follows:

	1919.	1918.
Total cars, bituminous.....	139,947	168,064
Total cars, anthracite.....	35,465	34,825
Total cars, lignite.....	3,276	4,658

Grand total of all cars, coal.. 178,688 207,547

A summary of reports for week ended February 8, 1919, as compared with the same period of 1918, based on actual reports from most roads, but with the results of some roads estimated, follows:

	1919.	1918.
Total cars, bituminous.....	134,039	179,069
Total cars, anthracite.....	28,112	31,626
Total cars, lignite.....	3,565	5,172

Grand total of all cars, coal.. 165,716 215,867

#### COPPER SITUATION DISCUSSED BEFORE SECRETARY OF LABOR

As a result of conferences between officials of the Department of Labor and delegates representing the workers in the copper industry of Montana, Utah and Arizona, the men have appointed a permanent joint conference committee, which is empowered to confer with the managers of the industry with a view to establishing a working agreement for the delicate period of readjustment on a peace basis.

The men adopted resolutions urging Congress to pass such legislation authorizing government aid as will furnish long term credits to facilitate resumption of our export trade in raw materials, agricultural products and manufactured goods, and recommending to Secretaries Baker and Daniels to hold the copper stocks they have on hand for the army and navy.

In the opinion of Labor Department officials, the most important result of the conference has been to promote a spirit of co-operation between the owners and employees in the industry. John D. Ryan, president of the Copper Export Association, met the men, and without reserve laid his cards on the table, revealing to the men the critical situation in the industry, which must result in a complete shutdown of the mines and smelters unless through mutual assistance of employers and workers the business can be tided over the next few months. The men presented the serious condition of unemployment prevailing in the copper districts.

The men returned to their respective districts to lay the facts before their fellow workmen. No definite agreement was made, because the labor delegation had no legislation or treaty powers, but was invited to Washington by the Secretary of Labor simply to learn the actual condition in the industry. Having done so, they will report to their principals and convey the desire of the Government that they await with forbearance the passing of the temporary crisis, in the full and reasonable expectation that conditions will be remedied in the near future.

During their stay in Washington, the labor men interviewed the senators and representatives of their respective states, and have recommended to them the passage of laws extending financial aid to banks and trust companies for the purpose of helping American industries. They also called on Mr. Burleson, Postmaster General, to urge him to enter the market for copper products for use in the wires and cables under his control.

The Department of Labor was represented in the conference by Secretary Wilson, Felix Frankfurter and H. L. Kerwin, assistants to the secretary, and Hywel Davies, Federal Labor Administrator for Arizona. Eugene Meyer, Jr., represented the Treasury Department.

## MEETING COAL'S IMMEDIATE NEED

By GEORGE H. CUSHING

The coal trade wants to be profitable; for the first time in its history, it had an opportunity—while the war lasted. It has had a taste of what it means to make a profit on every ton of coal produced even though it had the annoying experience of handing over a bigger portion of that profit to the Government in form of taxes. Nevertheless it knows now what it means to make money. It wants to continue to make money.

But with the passing of the war which created demands larger than the supply, the coal trade is confronted by the inherent difficulties of its position. Operators know today that the production, or at least the potential production, is larger than the market can absorb. In seeking a profit it is confronting the towering difficulty of trying either to persuade the unnecessary mines to retire, or to persuade those mines, if they continue in existence, to cut their production down to a point where the market can readily absorb the coal that is produced. This is almost an insuperable task.

But if that is not done—if production is not cut to a point where it equals exactly the demands of the country—the coal industry is facing destruction as a result of too active competition.

Standing at a point where insolvency seems to face it in either direction it turns, the coal industry is in a mood to try almost any kind of an experiment which will bring reasonable safety out of the present situation.

To one who stands on the side line and watches the method of procedure the situation seems to be about as follows: The coal trade made a certain amount of money during the war. This money is in part available to the coalmen to spend in some way. They can dissipate these accumulated earnings by fierce and riotous competition which will have the virtue—if it is a virtue—of returning it in cut prices today to the people from whom, by the process of high prices, it was taken a short while ago.

The alternative method is to invest a part of this money in the maintenance of associations which shall try to bring the coal men into a mood for cooperation, through which not only the old money may be retained but new money added to it.

The question before the trade is whether this alternative method can succeed. Therefore the question is: Is this not merely a new and modern method of losing the money which was accumulated as profit during a flurry in the trade?

Before the industry goes on any kind of a debauch in the matter of expenditures it would seem worth while to sit down calmly and reason the situation out by starting at the very fundamentals of the industry and coming thereby to understand the position in which the trade finds itself.

The essence of the law of supply and demand is that the price of a commodity shall fluctuate between profit and loss in direct response to whether the commodity itself exceeds or falls short of the demand. That is, if the supply exceeds the demand then it is a buyer's market. In such a time by shopping among over-zealous producers the buyer with an order to place usually succeeds in getting a rock-bottom figure. This in the end results in unprofitable business for the producer.

But if the demand exceeds the supply, as it did recently in coal, exactly the opposite thing occurs. Anxious buyers bid against each other for the insufficient supply and contrive to put up the prices upon themselves to the resultant profit of the producer.

The present fact in coal is that there are about seven thousand shipping mines. However, there is about business enough to keep four thousand five hundred shipping mines in operation. Therefore when there are seven thousand possible sellers trying to divide among themselves the business which only four thousand five hundred mines can easily satisfy, the present situation in coal is perfectly obvious and, indeed, unavoidable. It is toward that destructive level of prices which must ultimately terminate in the elimination of the weaker mines.

Of course, the situation could readily be solved and the industry could be put upon a profitable basis if a convention could be held in which the situation was described and in which the twenty-five hundred unnecessary mines could be persuaded to shut up shop and go into some other business. But few business men can be argued into an abandonment of a business enterprise in which they have invested money.

And, since all coal mines are unwilling to go through the experience which is necessary to eliminate the weak sisters forcefully from the business, it has been considered expedient to undertake a sort of cooperative movement in the trade.

The minute the facts are presented and that proposal is put forward it becomes apparent that the real purpose of cooperation is in some way to nullify the law of supply and demand and thereby to give a price to all operators which is profitable to all of them, notwithstanding the fact that the number of mines in existence is 50 per cent in excess of the number that is actually required.

With that frank statement of the obvious purpose of cooperation made, some fundamental questions are raised about the proper relations between the industry and the public, especially as that public is represented by its government.

In all of those courts which have been called upon to interpret our anti-trust laws, the common definition of restraint of trade

has been the ability of producers or merchants by any device to influence the price of any commodity to the whole people.

That is, if there are 50 per cent more mines than are necessary, and if the competitive spirit among them were allowed free play, the result would be a price for coal which must in short order eliminate from business those companies which had such short purses they could not longer endure the loss. Therefore, any device—whether a movement in cooperation or any other—which holds up that price to a point where it avoids the obvious consequences of too many mines, is properly a movement in restraint of trade, no matter how innocently that movement is phrased.

By the same decision of the same court a trust agreement is declared to be that device by which companies in the same line of business, which are independent of each other as far as financial control is concerned, allow their minds to meet in such a way as to accomplish a restraint of trade.

The courts have gone so far as to say that an agreement of this kind can be established on circumstantial evidence. That is to say, if there are seven thousand mines and only business enough for four thousand five hundred indicating a price which must eliminate some, and if the price remains high regardless of the fact, and if there exists an association or other convention of business men in that industry, the circumstance is *prima facie* evidence that the association or convention is responsible for the unnatural result.

In this connection attention is called to the fact that the Sherman anti-trust law is the expression in the statutes of the Federal Government of the will of the people on this subject. It is very specific in terms. It has not been repealed.

In addition, there was enacted in the first Wilson administration the Clayton law, which strengthens the purpose and intention of the Sherman anti-trust law by inveighing against unfair competition or against those devices by which the unnecessary units in a business are eliminated therefrom.

On these accounts the coal man stands face to face with the specific prohibitions of the law against the very things he wants to do to put his business immediately upon a profitable basis without first going through the ordeal of eliminating, by vigorous competition, the unnecessary units in the trade.

There is no contention here, and so far as I am concerned there never will be a contention that the coal industry is studiously setting out to create a combination in restraint of trade. It may, in its anxiety for its continued solvency, be led unwittingly and innocently into a movement which has all the outward appearances of such a combination. If so it will do so through ignorance and as a result of unenlightened leadership rather than through any willful effort to evade the law.

Coal men will not attempt anything in

the line of trustification because it knows that there is not available to it a single one of the devices which made successful any of the so-called trusts in the United States. That is to say, before a successful trust can be organized one of three things necessary to a successful trust must be available to those who undertake it, namely:

First, it must be possible to control the total supply of raw material; or

Second, it must be able to control the process of manufacture of raw material into the essential finished product; or

Third, it must be able to control either the machinery which makes possible a necessary economy or it must be able to control the patent under which those machines are made and thus come to control the machinery itself.

None of these things is possible in coal. The raw material is the coal itself in the ground. That cannot possibly be controlled because there is too much of it and because if it were purchased at so low a price as one cent per ton in the ground, and if the annual production were six hundred million tons a year the interest charge alone on the investment would be \$2.00 a ton of coal production.

Coal cannot control the process of manufacture because there is no manufacturing process in the coal business—at least, as at present constituted.

Coal cannot control the machinery in the coal business for many and obvious reasons.

On these three accounts the coal trade hasn't a single element in it which makes for the natural and assured success of movement in trustification.

But even if it had available to it one of these processes, it would be foolish to try to use it, because all of these methods have been tried out by men who are far more clever than are the coal operators. And every time such an effort was made the United States Supreme Court found the joint in the harness and succeeded in putting the trust out of business. So any attempt at trustification of bituminous coal is nothing more than a waste of time and effort for very obvious reasons.

Still, as I have said, the essential purpose of the movement of cooperation as outlined up to this minute is to effect the equivalent of the restraint of trade by getting a profitable price for coal regardless of the fact that the potential production in it is 50 per cent in excess of any known or immediately possible demand.

This effort of the coal industry is expressing itself in a veritable orgy along the line of organizing various associations. That being true, the serious question which confronts the industry is whether it is not wasting its substance and dissipating its recently accumulated earnings by financing organizations which cannot possibly per-



form the function for which they were created.

I have been perfectly astounded within the last month to discover the extent to which coal men are going in spending their money in support of these various cooperative movements. Roughly speaking, it is easily susceptible of proof that the coal industry is today collecting and spending at least a million dollars a year—I am convinced the sum is much larger—to support various kinds of associations. And the movement, rather than abating or showing any indication of abating, is actually growing.

For example, there are three national associations in three branches of the coal industry which are collecting for their support, at least at present, \$450,000 a year.

There are at least twenty local or district associations of operators which are collecting and spending at least \$300,000 a year for their support and maintenance.

There are at least ten state associations of retailers which are collecting and spending at least \$100,000 a year for their support and maintenance.

There are other associations of various kinds all having the same purpose in mind which make up a miscellaneous total outlay which will bring the gross expenditure of the national industry to at least a million dollars a year, or the equivalent of two mills per ton of annual output of bituminous coal.

I am perfectly willing to admit that such an outlay would be easily justified if the end sought was the natural outcome of the effort. I go so far as to say that if the average selling price of coal could be influenced as much as one cent per ton the outlay would be justified because the investment would yield a return of 500 per cent. But unless it can be proved that these efforts are in any sense effective in their essential purpose, the coal trade is merely fooling itself and wasting a million dollars a year in consequence.

I do not want to be understood as declaring against the association movement. On the contrary, I am heartily in favor of it. Indeed, in this argument I am trying to protect it.

What I am trying to say is this: If associations cost too much and do too little, or do nothing at all, the coal men are soon going to be heartily tired of the whole thing. Therefore, there will be a revulsion against the whole association movement. Thus will be destroyed an instrumentality which in itself is tremendously valuable if it is properly used. The great danger is that not being properly used and costing too much money, the coal men will come to decide that it has no value whatever and thereby will come to abandon the association effort for something which will do what coal men know must be done.

My effort, therefore, is to improve the

purposes of associations rather than to eliminate them. My purpose is to put the association movement in line to make itself useful and practical instead of encouraging it to be wasteful and despised.

That brings us to the question:

What are the proper purposes of association in coal and what can they do to justify themselves?

On this score I take a very common sense position.

The operator is essentially interested in the production of coal. The association which represents him, therefore, should be expressive of his natural interests and therefore should concern itself mainly with improved methods of production and with cutting of the cost of production. It should strive for economy in output.

The association of wholesalers is necessarily a merchandising organization. It should struggle toward the improvement in merchandising methods and in cutting the cost of selling coal at wholesale.

The retail association is naturally concerned with the retail distribution of coal. It should struggle for an improvement in retail methods and the economical operation of retail yards.

When it comes to questions which concern all three branches of the industry—such as conducting negotiations with the railways over rates and practices, such as encouraging helpful legislation or discouraging destructive legislation, or such as engaging in proper publicity for the industry—there should be a cooperative movement among the three branches of the trade that thereby the industry may speak with one voice on questions which are common to all of its branches.

When we get into that zone there is found an objective which will more than justify the present outlay of money for these various associations. That is to say, it is a poor operators' association which cannot, by study, enable its members to adopt those methods which will cut the cost of production by more than one cent a ton.

It is a miserably poor merchandising organization which cannot devise those methods which will cut the cost of merchandising by more than one penny per ton.

And that national association of retailers is a miserable failure if it cannot suggest and devise those means by which the cost of retailing coal is reduced by more than one cent a ton.

Still, we have for all three associations today a total appropriation which amounts to but two mills per ton on the total production. Yet we have easily possible economies which will effect the saving of vastly more than three cents per ton. Therefore, the return on the investment in association is easily 1,500 per cent.

My conclusion from this study is that the whole efforts at cooperation, and even the extent of that effort is justified if the movements are in the proper direction. But having looked over the program of the various associations, I am not convinced that present efforts are along any line which justify any expenditure whatever. Therefore, my personal opinion is that the various associations must change their objectives very quickly. If they do not, the whole movement is in danger.

#### **JOPLIN DISTRICT PRODUCERS ORGANIZE ZINC CHAPTER**

For the first time in its history The American Mining Congress has suspended its well-established practice of organizing state chapters, and has chartered a distinctly specialized chapter composed of the zinc producers of Oklahoma, Missouri and Kansas, known as the "Joplin District."

This chapter was completed January 28, 29 and 30, at a series of meetings of the district operators, held in Joplin and attended by Secretary Callbreath, of the Mining Congress.

The program included addresses by R. C. Allen, of the Federal Tax Commission; H. A. Buehler, state geologist of Missouri, and Hon. A. Scott Thompson, chairman of the Mines Taxation Committee of The American Mining Congress.

Visits were made to the mines of the district and a study of the properties and methods employed was made by Mr. Allen, who was the mine valuation expert of the Treasury Department during the administration of the first war revenue law.

Banquets and luncheons were given to the guests of honor, and after a study of the zinc situation, Secretary Callbreath accepted the suggestions of the Joplin producers and assisted in the organization of a tri-state chapter, to include only zinc producers.

The following officers and committees were named:

Governor, Victor Rakowsky.

Vice-Governors, F. N. Bendelari, Oklahoma; P. B. Butler, Kansas, and Howard I. Young, Missouri.

Executive Committee, Howard I. Young, P. B. Butler and F. N. Bendelari.

Membership, Finance and Subscriptions Committee, Charles E. Schwarz and Edgar Wallower.

Statistics and Economics Committee, A. E. Bendelari, H. I. Young and P. B. Butler.

Safety and Sanitation Committee, C. F. Dike, T. F. Coyne and D. D. Dunkin.

Legislation Committee, T. J. Franks and J. W. Hoffman.

The following editorial comment on the

chapter, published in the *Joplin Globe*, is of interest in this connection:

"It has always been the history of this field that in times of prosperity it has been impossible to get zinc ore producers to work together, while in times of poor ore prices it has seemed as if nothing could be accomplished. It has been a little like the old story of the Arkansas man who wouldn't fix his cottage when it wasn't raining because it didn't need it then, and couldn't fix it when it was raining.

"The organized zinc ore producers may not be able to take a hammer and saw and fix up all the leaks in the zinc ore industry right away, but they can at least come nearer accomplishing something worth while along this line than if they act as individuals. They don't really know how much good they can do organized because they have never tried it.

"Increasing the uses of zinc is almost certain to continue to be the big opportunity and hope in the industry. Lower prices for copper and tin and other metals mean that the zinc producers must go to a little more effort to accomplish all that ought to be accomplished in this direction, but if they will turn to the task with a will, they can do much. On the other hand, if they fail to try, zinc ore prices are in danger of being unsatisfactory for a long time.

#### **FEDERAL TRADE COMMISSION EXPLAINS NEW COST REPORTS**

Notice to bituminous operators concerning the purpose of the 1919 form of cost reports has been given by the Federal Trade Commission. It is intended that companies producing 60,000 tons and over per annum should report all of the details shown on the balance sheet and on schedules Nos. 1 to 18, inclusive, and that companies producing less than 60,000 tons per annum should report all of the details called for on the balance sheet and on schedules Nos. 1 and 1A and Nos. 11 to 18, inclusive. The latter companies may report as one figure for each schedule the information on schedules Nos. 2 to 10, should their records not furnish the details called from these schedules without an undue amount of labor.

The information called for in the cost form furnishes, in the opinion of the Commission, the main outline necessary for a uniform cost-reporting system or cost-accounting system for the coal industry.

The accounts as outlined on this form are not considered to be all of the details which might be necessary or valuable to each or every operator but are only the controlling main items which it would be essential for the officials of the company to have before them at all times for the efficient operation of its properties.

## INDIVIDUALISM VS. PATERNALISM

BY THOMAS A. O'DONNELL<sup>1</sup>

*Formerly Assistant to Oil Director of U. S. Fuel Administration*

I have no scientific knowledge regarding the oil business. I was raised in the oil fields of America, and sold papers on the streets of Bradford, Pennsylvania, forty years ago, and have been pretty much in sight of oil derricks ever since.

When the fuel administration was organized and they established an oil division, and honored one of California's citizens with an appointment as director of that division, I was asked to go back there and assist him as director of production in connection with the problems of petroleum in the necessity that was then confronting the nation. The work has been very interesting to me, and I feel rather proud of the accomplishment of the petroleum industry of America in meeting the national needs under stress.

There was nothing that entered into the problems of war of greater importance than petroleum. All modern war equipment, either for lubrication or power to drive itself, depends upon petroleum. All of the damnable inventions of humanity leading to the destruction of life were propelled by petroleum. There was organized on the western front by the American and allied forces one of the greatest mobile transportation systems that ever was gathered together in history, and was largely a factor in the making effective preponderance of the Allies, all due to the wonderful supply of petroleum always available back of the lines. The use of petroleum by the allied armies and for commercial purposes in this country grew to the astounding figure of 1,200,000 barrels per day. We produced in this country about 960,000 barrels a day. We were getting 140,000 barrels a day out of Mexico, and drawing to the extent of about 100,000 barrels a day from our stocks at the time the armistice was signed. With all of the difficulties in a commercial sense, with all of the uncertainties as to supply and labor, and all of the problems involved in the uncertainty of results in the drilling of our wild-cat wells, the United States went through the war with a production practically equal to any time in its history, notwithstanding that at the early stages of the war it looked very much as if we would be drawing on our stocks in an excessive manner that would be dangerous if the war lasted for a few years. The business was in a healthy shape. We were at the time of the signing of the armistice having more or less problems in connection with the gasoline supply, but we were prepared to take care of them in all of the requirements that would probably have arisen.

The world could not have built sufficient aeroplanes to run out of gasoline from America. We were there with the goods.

Feeling as I did when going to Washington I was very much elated and pleased to realize that Mr. Requa, who was at the head of the division, agreed with me that it was no time to experiment in government direction; that if we were going to succeed it was necessary to get the cooperative, active, energetic assistance of the American producer of petroleum. There was organized at that time what was known as the National Petroleum War Service Board. This board early in its history consisted of about twenty men gathered from the industry, its various branches, from all parts of the country. This board was frankly a trade representative board. I want to say here, and I want to repeat it at every opportunity that I may have, that America should be proud of the kind of men who devoted their services to the petroleum industry of America. The service was absolutely unselfish. It had one great dominating feature, and that was, "What is the proper thing for the industry to do in our national need?" Men were asked to go to their boards of directors with a request that they appropriate millions of dollars to carry out projects that would be useless after the war was over; and there was at no time anybody asked to do that or to create facilities who hesitated a moment as to whether they would do it or not if they could be shown that it was needed. It was frequently said, when we asked such organizations as the Standard Oil Company, to put fifteen or sixteen million dollars in additional pipe line, which would be useless after the war, "That is nothing for them. They can afford to do it. Those things are only relative." It is quite true, that is so; but it was done without hesitancy. For two or three months I felt that the time had come for the first time, when a republic, such as ours, was to be put to the test of whether or not this kind of government could succeed; and I am sorry to say that I sat there many a night when I felt like crying for the hopelessness of the confusion that we were drifting into. I believe that that was largely due to a false conception of American citizenship and American business men. It was brought about by that frame of mind that believes in this modern improve-everything method, that it was unsafe to turn over to the man who had to do with production or business the solution of the problems of his particular business. If the thought should prevail that any large part of the citizenship of this country, be they

<sup>1</sup> From an address before the California Chapter of The American Mining Congress.

oil men, mining men or steel men, are unfit to go to the center of government, and there direct the problems involved in their particular line of business in the national interest, then God help this country—we never will stand. There gradually commenced to be order brought about out of the confusion at Washington; and that was largely due, gentlemen, to the conviction which dawned upon a lot of our American people, that you had to call to your assistance men who knew the problems that you had to solve. In handling the petroleum production of America one of the proudest distinctions that I claim for myself is that I never issued one single order to the producers of America. We had many problems, some of them very annoying, and I established the policy of going to the seat of the trouble. I have traveled a distance as great as several times around the world. I, perhaps, have met more producers of oil in America than any other one man in the nation at that time; and I addressed the producers, or whoever it was that the problem involved concerned, "Now we want you boys to sit around this table and find a solution, not for the best interest of yourselves individually, or your industry here, but in the national need;" and I tell you it is a great satisfaction to a man as an American to feel that it was done in the way it has been done.

I am a little apprehensive—nobody much agrees with me lately—they say I am old-fashioned—I don't know whether "reconstruction" is the right word or not—but of the frame of mind that is prompting a great deal of the oratory that I have heard since the signing of the armistice, and that is along the line that the war taught us so many things that we have been doing wrong, and that now they are going to change the whole business and do it right. I have little sympathy with that idea. We have been told that this method and the other method was the proper one to pursue; the Government should take a greater control of things generally, and direct the people in proper channels. I am not for it. I believe that we gathered together for the purpose of war four million of our young manhood, who can go into any part of the world, I care not where, where human beings can live, and they can out-fight and out-do all comers. Is that because of the blood that is in us? You know there are thousands, even millions of us, that have a little German running through our veins; there is a lot of Irish; but we have been building in this country one of the greatest people that has existed in all history. And why? Because it is one of the countries through all history that has most promoted individual effort. I had some occasion to know about the problems even across the water, although I was dealing with the production in this country. The transportation problems got to bothering the English, and the English government wanted a pipe line across England, and wanted it quick; and

they sent over here to get some men to build it quick and right. In France they were having trouble in transportation of petroleum, and troubles back of the line, and we sent over men to do it for them. They had troubles in their harbors, unloading their ships, and we sent them men to do it for them. It looked at one time as if old Hindenburg had his eye on Paris, and they had to have a railroad around it, because all railroads in France start in Paris, and they turned the job over to Pershing, and he built it. When Russia was in trouble we sent them men to solve their transportation problems. The whole world thinks of no other place to send for men to do any thing that they want done. Now they don't send to paternalistic Germany—and Germany was largely paternalistic, looking after its citizens better than any nation on earth, from some people's standpoint. They would feed you and give you a place to lie down, and then they would give you a mark to walk on. What I object to is the mark to walk on. We have built this country up on the opposite basis. You know they say the modern thing, the great machines, modern business, and all of these things need organization; "We must have the Government do it for us. They must direct us in certain channels." I used to drive an old horse and cart through the oil fields of Los Angeles twenty-five years ago, and I would rather crawl into that two-wheel cart behind that old horse, which was mine, to get in when I wanted to, and out when I wanted to, than to ride in the finest limousine that science has ever devised, with a driver and crew to take care of it, with feather cushions to sit on, if some one is going to tell me where and when and how I go. Now you know this brings back something. They say it is very injudicious for me or anybody else to criticize some of the things that we are proposing to do in this country for fear of spilling the beans. I have been spilling the beans ever since the war started, and the constructives have been picking them up and putting them back in the bag. Coming back to the socialistic trend of paternalism, we are drifting toward that goal. It is a frame of mind that ran riot in Russia, but it has been growing here and in every other country on earth to a large extent; and it is impractical idealism that you are going to make something out of humanity that it ain't. So they are going to fix us now in Washington. I think the work has passed. I do not regard, as many men do, the confusion in Russia, except I have a heartfelt sympathy for the poor fools that have got to submit to it. I think it is a lesson to the world of the impracticability of that kind of thought, that the bottom can run the top, or that the Government can run things for us. You know we just got rid of the thought in this world that divine right permits a man to tell all humanity where to head in. Now, I am just as ap-

prehensive of a self-appointed intellectual right to tell us where to head in. It is dangerous. Men sit in closed-up closets and they get to thinking so hard that they make up their minds that the whole responsibility for humanity is on their shoulders. Those men are dangerous. I don't care what their intentions are toward you. The Kaiser, I have no doubt, had the very best intention toward his subjects; but he believed that it was in their best interests to go where he told them to, and to walk when he told them to walk, and to fight for the fatherland when he told them to fight. I was down in Atlantic City not long ago and Henry L. Dougherty asserted that there were no more Democrats who believed in the Jeffersonian doctrines because in all the papers that Jefferson ever wrote there was a strain running through them that that country is the best governed which is governed the least. I am that kind of a Democrat yet. Now, as to this disease of socialism. You know I have a right to talk in the interest of the fellow who crawled up from the bottom. I helped my poor old mother to make a living when I was ten years old. We lived in a tent in the winter time in the state of Colorado. The next spring we hauled down some slabs from an old sawmill and built us a little hut, and that old lady is alive today and happy and contented, and she had an absolute horror of any of us children being taken to a state institution, and, thank God, we never were. It sounded bad. We didn't have any butter or sugar to eat during that winter, but we are all alive, and we were happier than if we had been taken to a marble palace by some paternalistic government and raised with a spoon the rest of our lives.

Socialism has been creeping in, in thought at least, to our governmental bodies, our executive halls, if you like, and it has been expressed at the expense of the oil men of California and Wyoming. I went to Washington to try and save a life's earnings involved in that business. I became a convert finally, for a very selfish reason, to the system of leases and royalties. If I had to do it over again I would go back and scratch and build another log cabin before I would do it. The foundation of socialism underlies the thought that the things that are in the waste, undeveloped soil belong to all of the people, whether they take part in their development or not. It is false. The things on this earth were put here to be used by him who exerted his energy to make use of them, and not for the whole people. It is just as socialistic in principle, and will finally lead you where the Russians are today, to say that the people in New York state should have a royalty, or any kind of a double tax, from the oil lands of the United States in California because the Government still has them in its possession. It is wrong. It is wrong in principle. It would be a godsend, financially, to the men

who have been struggling nine years with these lands here, but the principle is wrong, and it is going to get us in wrong if someone sooner or later does not assert himself in the halls of Congress and get back to the idea of home rule. (That is an Irish term.) The leasing—the idea that a part of the wealth of the west is for the benefit of all the people—is destructive, not because of us fellows engaged in the development of that oil, but of the principle underlying the spirit of individualism in this country. What the Government ought to do is to establish law and order for the protection of property among men and reward those who go out and get it. The same principle, if established sixty years ago, and applied to agriculture and metal mining, as it is now sought to apply it to oil, there wouldn't have been a railroad west of the Mississippi river today. The very development we have there is the result of that human incentive to do, and the happiness of life is in the doing of it.

There has very little occurred yet in America that has been very destructive, but it is a dangerous thing; it is creeping in on us; every orator that you hear nowadays is telling you "The country has done that," and "The Government has done this, and individual effort cannot do that." They tell us they are going to take over the railroads and run them, because it is the only government that is not doing it—and I thank God for it. They are doing it in Mexico and Spain. It may cost us more; it may cost us a little more man power, but you know, we talk too much, in my judgment, about doing away with work. Some seem to think that God Almighty made us, and that the best thing for us is to sit down and do nothing. The fact is that there is no life of any kind, whether a human being or what it is, but needs activity for good healthful growth. He don't thrive on idleness. Idleness in human beings creates viciousness and decay; and most of us, in addition to that, have a streak of vanity; and one of the things that prompts us to do the things that we do is to be able to say we did it ourselves; it is ours; I have got it, and then I can take it in my hand and show it to some woman. You know God made men and he made chickens, and they are a good deal alike. Have you ever noticed an old rooster; how proud he was and how he threw his chest out after he had finally scratched out a crumb to show to some hen.

#### DISCOVERY OF PETROLEUM IN ENGLAND REPORTED

The United States Fuel Administration received information by cable, February 22, concerning the reported discovery of oil in England, it was announced today. The cable advices were to the effect that considerable gas had been found, but no oil had yet been struck.



## COAL PURCHASING POLICY OF RAILROAD ADMINISTRATION SET FORTH IN DETAIL

Walter D. Hines, Director General of Railroads, has outlined the coal purchasing policy of the United States Railroad Administration as follows:

The policy of the Railroad Administration is to avoid any action calculated to depress wages of coal miners or the amount of coal produced.

Sometime ago our attention was called to the fact that there was a concentration of orders for the Railroad Administration in certain fields so as to leave other fields without railroad orders. We promptly met this situation by giving instructions that coal should be brought as far as possible by each railroad on its own railroad.

The point was also made that we were using our storage coal to such an extent as to reduce very largely the current production. We promptly met this by giving instructions that we should diminish our withdrawal of coal from storage and use a large amount of current production.

It was also claimed that the Railroad Administration was trying to force down prices to such an extent as to bring about a decrease in the price of labor. We met this point not only by requiring the wider distribution of purchases already mentioned, but also by providing that we should not suggest any prices to the operators and to stipulate that any prices named by the operators must be based on existing wages.

The point has also been made that publicity ought to be provided in the obtaining of bids and making of contracts. We have met this point by providing that any prices which are established will be available to representatives of the miners or others who may be interested and who may request the information, both as to prices and as to the names of the sellers.

This represents our general policy, which is actuated by our earnest desire to protect the general situation. The Railroad Administration has a very important selfish interest to accomplish this, because whatever will protect the general situation will help general business, and this is of vital importance to the Railroad Administration.

It is very important, however, to bear in mind the fact that the Railroad Administration's part in these matters is much more restricted than is generally assumed. Only about one-fourth, or a little more of the total bituminous coal production, is consumed by the railroads. To a very large extent the mines, whose output can actually be used for railroad purposes, is restricted on account of the quality of coal needed. A further important point is, that at the request and, indeed, at the insistence of the Fuel Administration, the Railroad Administration has made contracts for a large part of its coal, with the

result that only about 20 per cent of the coal used by the Railroad Administration is not covered by contract. Naturally the contract coal cannot be modified except with the consent of the operators.

Moreover, the very large amount of storage coal which the railroads have accumulated was accumulated at the request of the Fuel Administration, and while we are endeavoring to use this storage coal in such a way as not to embarrass the situation, the fact remains that the coal is there and must be consumed.

It must also be remembered that the volume of coal which the Railroad Administration consumes is limited by the volume of business, and as business is now falling off, this operates to reduce the volume.

It seems to me we have met substantially the various needs that have been presented to us. The only other possibility that occurs to me is that if the operators with whom we have made contracts for about 80 per cent of the coal, are willing to release us from those contracts, we will be glad to distribute that coal among the various mines which can produce the necessary quality of coal and which will be willing to sell at the same prices we have under the contracts.

### DISPOSAL OF GOVERNMENT'S METAL STOCKS DISCUSSED

Two meetings were held recently in the office of the director of sales on the disposition of surplus stocks of copper, brass and lead. The meeting, with regard to the lead situation, was attended by members of the sales office, a representative of the Geological Survey and representatives of the lead industry. At this conference it developed that the surplus quantity of lead in possession of the War Department is a very small proportion of a year's production. While the figures are not yet final, on the basis of present information, the department cannot have more than a few thousand tons to be disposed of ultimately. This quantity represents the surplus of lead in possession of the War Department which was all located by the Lead Producers' Committee, at the instruction of the Ordnance Department, for use on cost plus contracts.

Although the details of the arrangement have not yet been worked out, it is practically agreed that some arrangement can be made between the War Department and the lead producers by which the surplus stocks of lead now in the hands of the War Department may be gradually fed into the market without affecting market prices and market conditions.

The meeting on disposition of the surplus brass and copper now on hand in the various

bureaus of the War Department was attended by representatives of the copper industry and members of the sales office. The representatives of the War Department, while anxious to prevent loss to the Government on this material, realize that it would be injurious to the industry and especially to the workers if the market prices were upset by throwing this surplus on the market over a short period. Such action would also tend to reduce market prices and thus defeat the desire to obtain for the Government a fair price for this surplus stock.

This meeting was merely a preliminary one, at which only a small percentage of producers was represented, but the discussion of the question will undoubtedly lead to an agreement with all producers which will permit a gradual feeding into the market of the surplus copper and brass in such a manner as to obtain fair prices for the Government without upsetting the market. The details will be worked out later with a full representation of the producers concerned.

#### **SURVEY GATHERING DATA ON MINERALS OF WORLD**

George Otis Smith recently addressed the following letter to the mining engineers of the country:

"In connection with a special investigation made during the last year the United States Geological Survey has accumulated data descriptive of the mineral deposits of the world, both developed and undeveloped. It is the purpose to continue the collection of information of this type in recognition of the present need to know better the mineral resources of the world with which our own mines are in competition and which also offer opportunity for investment of American capital and engineering talent.

"The larger mining corporations and many mining engineers and geologists have already contributed generously to the Survey's file of digests of reports and it seems logical that the records thus obtained should be made available for those interested, but in view of the nature of the records and the continual additions made to them, publication is not practicable, so the plan is to have these files open to all mining engineers and geologists who are studying the mineral resources of any country or district. J. B. Umpleby is the geologist in charge of the part of the Survey organization devoted to foreign mineral deposits and he may be consulted regarding these files. It will also be a pleasure to me to correspond with you regarding the data the Survey already possesses on any district and especially regarding any contribution you or your associates may be able to make that would add to the value of these files. It is an opportune time for American mining men to pool their information, but any confidential data that the contributor may desire to be made use of only by Government geologists will con-

tinue to be so treated and not included in the open files.

"I am of the opinion that our science must be put on a broader foundation if it is to be of greatest usefulness in furnishing facts to the builders of industry."

#### **LOUISVILLE NATURAL GAS ORDER AGAIN IS UPHELD**

A decision by Judge Thomas of the Court of Appeals of the State of Kentucky, at Frankfort, denies an injunction against an order of the United States Fuel Administration to effect equitable distribution and conservation of the waning supply of natural gas. This decision sustains a similar decision of a month ago rendered by Judge Kirby in the Circuit Court at Louisville.

These decisions deny the motions made on behalf of the city of Louisville and the Rev. J. M. Maxon for an order to restrain the Louisville Gas & Electric Company from rationing the supply of natural gas to consumers in Louisville.

The rationing order of the Fuel Administration provides that each consumer shall be permitted to burn not to exceed 1,000 cubic feet per day, unless permits for additional amounts needed are obtained from the Federal Fuel Administration for Kentucky. It also provides that "whenever the supply of natural gas is in excess of the quantity required to fill the demands therefore within the limit hereby imposed, the companies may make a pro rata delivery of such excess to their consumers."

During last winter's severe weather the demand was in excess of the supply which flowed through the main leading from the West Virginia fields to Louisville. During the summer the city attorney of Louisville and others requested the Fuel Administration to take action which would prevent suffering from shortage of supply in case of another severe winter. The order to accomplish this result was issued after a conference held at the Fuel Administration on October 10 and 11.

This conference was attended by more than a score of leading officials interested, prominent citizens of Louisville and well-known experts in natural gas affairs. It was shown that 8 per cent of the Louisville consumers have been using 50 per cent of the entire quantity of gas consumed in the city. Ninety-six and one-half per cent of the consumers use an average of less than 1,000 cubic feet a day each. The number of consumers who were using more than an average of 1,000 cubic feet a day was only about 1,500.

#### **Further Suspension of Assessment Work Refused**

On February 17 the House declined to allow the passage, by unanimous consent, of the bill suspending assessment work until the close of the current year.

## WANTS STANDARDIZATION OF PETROLEUM PRODUCTS

In an endeavor to bring the specifications for petroleum and its products into harmonious relation one with the other in the different states, the United States Fuel Administration has sent a letter to the governor of every state in the Union in which is enclosed a memorandum concerning the laws in each state as to gasoline inspection, and also copies of the bulletins issued by the Committee on Standardization of Petroleum Specifications.

This committee for months has been investigating the question of specifications for gasoline and other petroleum products. The most expert authorities in the country have been in consultation and a series of standards are gradually being developed which are being put out from time to time in bulletin form.

The memorandum prepared regarding the laws of the different states covering gasoline inspection, show that the specifications vary to a great degree in different localities. It is believed that such conflicts tend to make the product cost the consumer more money without an equal offset in advantages. Common standards, the Committee on Standardization contends, both as to method of test and quality, would result in much better service to the public.

In the appeal made to the governors of the various states for cooperation, it is pointed out that while the Fuel Administration will cease to function when peace is proclaimed, the Committee on Standardization of Petroleum Specifications is to continue in existence six months after that time.

## GAS SITUATION IN MIDDLE WEST DISCUSSED AT HEARING

In connection with the question of adequacy of supply of natural gas available for distribution in Ohio, Indiana and West Virginia a hearing was held February 17, at the William Penn Hotel, Pittsburgh, Pa.

The hearing was called at the request of the Logan Natural Gas & Fuel Co., of Ohio, and the Central Indiana Gas Co., who desire to show that the situation in that vicinity in regard to adequacy of supply of natural gas now warrants certain modification of an order issued by the United States Fuel Administration on December 12, which directed the discontinuance of supply to consumers classified in a lower class than Class III until April 15, 1919, unless otherwise ordered.

The State Fuel Administrators and the Public Service Commissioners of the states of Ohio, Indiana and West Virginia, which are dependent chiefly for their natural gas supply upon wells in West Virginia, were present.

The Reserve Natural Gas Co. of West Virginia supplies the Logan Natural Gas & Fuel Co. of Ohio, which carries and distributes this supply across the state, and delivers in turn to the Central Indiana Gas Co. and other

Indiana companies for distribution in that state.

The order issued on December 12 was the result of a hearing held in the Fuel Administration building at Washington on December 10. At the hearing it was generally conceded that the supply was inadequate to meet the demands made upon it from consumers in Classes 1, 2 and 3. These classes include domestic consumers and other uses defined as most essential. This order met general approval of the authorities of the communities served, and these now protest against its withdrawal as being detrimental to domestic consumers. The service companies mentioned, however, declare now that the situation has changed sufficiently to warrant certain modifications of the order.

## PERSONALS

Pope Yeatman has leased permanent mining engineering officers, and on and after February 27, any mail for Mr. Yeatman or for his partner, Edwin S. Berry should be addressed to Room 708, 111 Broadway, New York, instead of to 60 Broadway, as at present.

J. T. Connery, of Chicago, was in Washington several days during the month.

A. Scott Thompson, chairman of the Committee on Revenue Legislation, for The American Mining Congress, has returned to his home, Miami, Okla., after being at the Washington office for several weeks.

Hennen Jennings is in California, where he will remain for several months.

Bulkeley Wells, president of The American Mining Congress, spent the greater part of February in New York and Washington.

Victor Brandt, who has been in Washington in the interest of the potash producers, has returned to California.

Edison Storage Battery Company announce the removal of their New York sales office from 209 West 76th Street to 247 West 35th Street, where larger and better quarters have been obtained.

Jerome J. Day, of Moscow, Ia., was elected president of the Idaho State Mining Association, to succeed Stanly A. Easton, at the meeting of the Association, held at Boise, February 12. J. B. Eldridge was elected vice-president, Ravenel Macbeth, secretary. The executive board elected is as follows: James F. McCarthy, Wallace, Ia.; Irvin E. Rockwell, Bellevue, Ia., and W. N. Sweet, of Boise.

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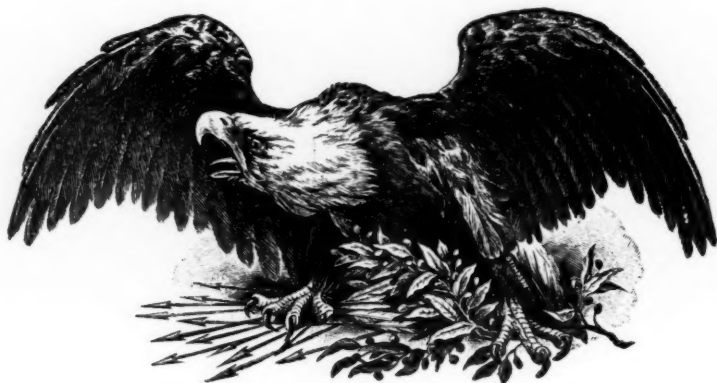
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## CHAINS

Frank Prox Co., Terre Haute, Ind.  
Jeffrey Mfg. Co., Columbus, Ohio  
Morse Chain Co., Ithaca, N. Y.

## CHEMISTS

Beach & Co., Denver, Colo.  
Hunt, Robt., & Co., Insurance  
Exchange, Chicago, Ill.  
Indiana Laboratories Co., Ham-  
mond, Ind.  
Ledoux & Co., A. R., Inc., 99 John  
Street, New York City  
E. J. Longyear Co., Minneapolis,  
Minn.  
Lucius Pitkin, Inc., 47 Fulton  
Street, New York City  
Richards, W. J., Denver, Colo.  
Western Chemical Co., Denver,  
Colo.

## CLAMPS (Trolley)

Ohio Brass Co., Mansfield, Ohio.  
Electrical Railway Equipment Co.,  
Cincinnati, Ohio  
Electric Service Supplies Co., 17th  
& Cambria Sts., Philadelphia, Pa.

## CLUTCHES

Connellsville Mfg. & Mine Supply  
Co., Connellsville, Pa.  
Marion Machine, Foundry & Sup-  
ply Co., Marion, Ind.

## COAL COMPANIES

Bertha Coal Co., Pittsburgh, Pa.  
Lehigh Coal & Navigation Co.,  
Philadelphia, Pa.  
Thorne, Neale & Co., Philadelphia,  
Pa.

## COAL CRUSHERS

Connellsville Mfg. & Mine Supply  
Co., Connellsville, Pa.  
Jeffrey Mfg. Co., Columbus, Ohio  
Worthington Pump & Machinery  
Corp., 115 Broadway, New York  
City.

## COAL CUTTERS

Goodman Mfg. Co., Chicago, Ill.  
Jeffrey Mfg. Co., Columbus, Ohio

## COAL HANDLING MA- CHINERY

Willis E. Holloway & Co., Cleve-  
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Jeffrey Mfg. Co., Columbus, Ohio  
Marion Machine, Foundry & Sup-  
ply Co., Marion, Ind.

## COAL MINING MA- CHINERY

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Jeffrey Mfg. Co., Columbus, Ohio  
Marion Machine, Foundry & Sup-  
ply Co., Marion, Ind.

## COAL WASHING MA- CHINERY

Jeffrey Mfg. Co., Columbus, Ohio

## COCKS (Locomotive, Cyl- inder and Gauge)

The Lunkenheimer Co., Cincinnati,  
Ohio  
Nicholson, W. H., & Co., Wilkes-  
Barre, Pa.  
Ohio Brass Co., Mansfield, Ohio

## COILS (Choke)

Electric Service Supplies Co., 17th  
& Cambria Sts., Philadelphia, Pa.

## COMPANY STORES (Cou- pons)

Allison Coupon Co., Indianapolis,  
Ind.

## COMPRESSORS, AIR

General Electric Co., Schenectady,  
N. Y.  
Machinery Warehouse & Sales Co.,  
Old Colony Bldg., Chicago.  
Novo Engine Co., Lansing, Mich.  
Standard Scale & Supply Co., The,  
1631 Liberty Avenue, Pittsburgh,  
Pa.  
Handle Machinery Co., The, Cin-  
cinnati, Ohio  
Worthington Pump & Machinery  
Corp., 115 Broadway, New York  
City.

## CONCENTRATORS (Table)

Allis-Chalmers Mfg. Co., Milwau-  
kee, Wis.  
Mine Equipment & Supply Co.,  
Denver, Colo.

## CONCRETE MIXERS

Standard Scale & Supply Co., 1631  
Liberty Avenue, Pittsburgh, Pa.

## CONDENSERS

Allis-Chalmers Mfg. Co., Milwau-  
kee, Wis.  
Worthington Pump & Machinery  
Corp., 115 Broadway, New York  
City.

## CONTROLLERS

General Electric Co., Schenectady,  
N. Y.  
Electric Service Supplies Co., 17th  
& Cambria Sts., Philadelphia, Pa.

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Marion Machine, Foundry & Sup-  
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United Iron Works Co., Kansas  
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Worthington Pump & Machinery  
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Allis-Chalmers Mfg. Co., Milwau-  
kee, Wis.  
Jeffrey Mfg. Co., 958 N. Fourth  
Street, Columbus, Ohio  
Machinery Warehouse & Sales Co.,  
Old Colony Bldg., Chicago.  
United Iron Works Co., Kansas  
City, Mo.  
Worthington Pump & Machinery  
Corp., 115 Broadway, New York  
City.  
Mine Equipment & Supply Co.,  
Denver, Colo.

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Jeffrey Mfg. Co., 958 N. Fourth  
Street, Columbus, Ohio

## CROSS-OVER DUMPS

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Phillips Mine & Mill Supply Co.,  
Pittsburgh, Pa.

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Frank Prox Co. Terre Haute, Ind.

## DERRICKS AND DERRICK FITTINGS

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## DESIGNERS OF PLANTS

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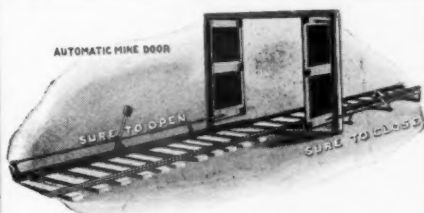
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Standard Scale & Supply Co., The, 1631 Liberty Avenue, Pittsburgh, Pa.

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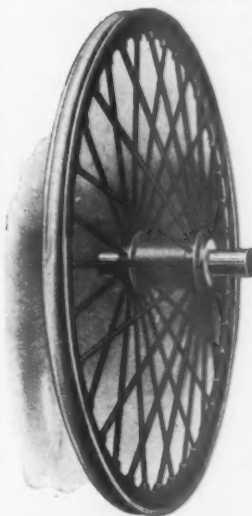
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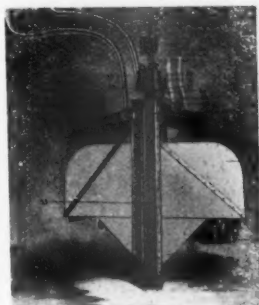
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General Electric Co., Schenectady, N. Y.  
Jeffrey Mfg. Co., 958 N. Fourth Street, Columbus, Ohio

Pneumelectric Machine Co., Syracuse, N. Y.  
Randle Machinery Co., The, Cincinnati, Ohio  
Vulcan Iron Works, Wilkes-Barre, Pa.

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Standard Scale & Supply Co., The, 1631 Liberty Avenue, Pittsburgh, Pa.

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Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Novo Engine Co., Lansing, Mich.  
Holmes, Robt., & Bros., Inc., Danville, Ill.  
Standard Scale & Supply Co., The, 1631 Liberty Avenue, Pittsburgh, Pa.  
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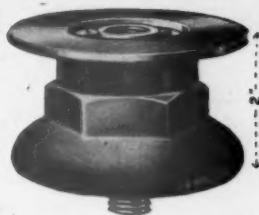
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